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**From:** Lottig, Justin  
**Sent:** Monday, January 24, 2011 8:42 AM  
**To:** 'michael.tsuji@doh.hawaii.gov'; stuart.yamada@doh.hawaii.gov  
**Cc:** 'Tanimoto, Jamie'; Keener, Laura; Whelan, Joseph  
**Subject:** RE: Stormwater Sampling Results from January 13

Mike/Stuart, attached are the final laboratory reports from the January 13, 2011 stormwater sampling event. Please let me know if you have any questions. Thanks.

Justin

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**From:** Lottig, Justin  
**Sent:** Friday, January 21, 2011 4:55 PM  
**To:** michael.tsuji@doh.hawaii.gov  
**Cc:** 'Tanimoto, Jamie'; Keener, Laura; Whelan, Joseph  
**Subject:** Stormwater Sampling Results from January 13

Mike, as requested per our phone conversation, attached are the results of the stormwater samples collected on January 13. Please note that the sample labeled "Culvert" is our approved sampling location. Please let me know if you have any questions. Thanks.

<< File: Summary Table stormwater\_1\_14\_2011.pdf >>

Justin H. Lottig  
Environmental Protection Manager  
Waste Management of Hawaii  
92-460 Farrington Highway  
Kapolei, HI 96707  
808.668.2985

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**WMH 000475**

# Food Quality Lab

3375 Koapaka Street, G314  
 Honolulu, HI 96819  
 Phone: 808-839-9444, Fax: 808-839-9744

**AECOM**  
 1001 Bishop St., Suite 1600  
 Honolulu, HI, 96813  
 Attn:Tobias Koehler  
 Project Name: WGSL

## LAB REPORT

Received: 01/13/2011 @ 8:35 PM  
 Completed: 01/19/2011 @ 7:45 PM  
 Project Number: 110113-2568-001  
 Temperature: °C

Sample ID: 110113-2568-001-01	Water Sample -1 Upcanyon			Sampled: 1/13/2011 @ 5:50 PM		Sampler: David Lin	
Analysis	Results	Units	MDL	Test Method	Analyzed	By	
Total Coliform (MPN)-Water	500	MPN/100ml	2.0	SMWW21 9221B	01/13/2011	8:45 PM	IQ
E.coli (MPN) - Water	74	MPN/100ml	2.0	SMWW21 9221 E	01/13/2011	8:45 PM	IQ
Sample ID: 110113-2568-001-02	Water Sample -2 Culvert			Sampled: 1/13/2011 @ 7:15 PM		Sampler: David Lin	
Analysis	Results	Units	MDL	Test Method	Analyzed	By	
Total Coliform (MPN)-Water	>1,600	MPN/100ml	2.0	SMWW21 9221B	01/13/2011	8:45 PM	IQ
E.coli (MPN) - Water	<2.0	MPN/100ml	2.0	SMWW21 9221 E	01/13/2011	8:45 PM	IQ
Sample ID: 110113-2568-001-03	Water Sample -3 Ocean Outlet			Sampled: 1/13/2011 @ 6:15 PM		Sampler: David Lin	
Analysis	Results	Units	MDL	Test Method	Analyzed	By	
Total Coliform (MPN)-Water	>1,600	MPN/100ml	2.0	SMWW21 9221B	01/13/2011	8:45 PM	IQ
E.coli (MPN) - Water	3.6	MPN/100ml	2.0	SMWW21 9221 E	01/13/2011	8:45 PM	IQ
Sample ID: 110113-2568-001-04	Water Sample -4 Ocean East			Sampled: 1/13/2011 @ 6:00 PM		Sampler: David Lin	
Analysis	Results	Units	MDL	Test Method	Analyzed	By	
Total Coliform (MPN)-Water	>1,600	MPN/100ml	2.0	SMWW21 9221B	01/13/2011	8:45 PM	IQ
E.coli (MPN) - Water	3.6	MPN/100ml	2.0	SMWW21 9221 E	01/13/2011	8:45 PM	IQ
Sample ID: 110113-2568-001-05	Water Sample -5 Ocean West			Sampled: 1/13/2011 @ 5:45 PM		Sampler: David Lin	
Analysis	Results	Units	MDL	Test Method	Analyzed	By	
Total Coliform (MPN)-Water	170	MPN/100ml	2.0	SMWW21 9221B	01/13/2011	8:45 PM	IQ
E.coli (MPN) - Water	<2.0	MPN/100ml	2.0	SMWW21 9221 E	01/13/2011	8:45 PM	IQ

Approved By: Tobias Q. Koehler

Friday, January 21, 2011

Page 1 of 1

WMH 000476





THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

Job Number: 280-11648-1

Job Description: 995|Waimanalo Gulch LF

For:

Waste Management  
Waimanalo Gulch Landfill  
92-460 Farrington Highway  
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.  
Stephanie Sanders  
Project Mgmt. Assistant  
1/21/2011 4:22 PM

Designee for  
Betsy A Sara  
Project Manager II  
[betsy.sara@testamericainc.com](mailto:betsy.sara@testamericainc.com)  
01/21/2011

cc: Mr. John Fong  
Mr. Tobias Koehler

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

**Client: Waste Management**

**Project: 995|Waimanalo Gulch LF**

**Report Number: 280-11648-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### **Sample Receiving**

The samples were received on 01/17/2011; the samples arrived in good condition and properly preserved. The temperatures of the coolers at receipt were 9.2C, 9.7C, 7.9C, 7.7C and 8.1C. The cooler temperatures were above the recommended receiving temperature of 6.0C. The client was notified and the lab proceeded with all requested analyses.

### **Holding Times**

All holding times were met.

### **Method Blanks**

Total Sodium Method 200.7, Sulfate Method 300.0A and Total Phosphorus Method 365.1 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits.

All other Method Blanks were within established control limits.

### **Laboratory Control Samples (LCS)**

The Method 625 LCS for Indeno(1,2,3-cd)pyrene was above control limits. Because this is a non-target compound, no correction action was performed.

All other Laboratory Control Samples were within established control limits.

### **Matrix Spike (MS) and Matrix Spike Duplicate (MSD)**

The method required MS/MSD could not be performed for Method 625 and Method 1664A HEM due to insufficient sample volume; however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample OCEAN OUTLET were outside control limits for Total Iron, Potassium, Magnesium and Sodium during Method 200.7 analysis because the sample concentrations were greater than four times the spike amounts.

The Matrix Spike and Matrix Spike Duplicate performed on sample OCEAN OUTLET exhibited recoveries outside control limits for Total Arsenic Method 200.7. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Total Arsenic and Selenium Method 200.7. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

### **Metals**

The Method 200.7 Continuing Calibration Verification (CCV) sample was above the control limits for Total Sodium. Because the data are

considered biased high and Total Sodium was not detected above the reporting limit in the associated Method Blank sample, corrective action was deemed unnecessary.

#### **General Chemistry**

Due to the sample matrix, the initial volume used for Total Suspended Solids (TSS) Method 2540D for samples CULVERT, UPCANYON, OCEAN WEST, OCEAN EAST and OCEAN OUTLET deviated from the standard procedure. The reporting limit (RL) has been adjusted proportionately.

#### **General Comments**

The analyses for Biochemical Oxygen Demand (BOD) and Hexavalent Chromium were performed at TestAmerica's Honolulu facility.  
TestAmerica Honolulu  
99-193 Aiea Heights Drive  
Suite 121  
Aiea, HI 96701  
Phone: 808.486.5227

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID Analyte	Client Sample ID CULVERT	Result / Qualifier	Reporting Limit	Units	Method
280-11648-1					
Field pH	8.14			SU	Field Sampling
HEM	5.1		5.0	mg/L	1664A
Bromide	0.73		0.20	mg/L	300.0A
Chloride	95		1.3	mg/L	300.0A
Sulfate	45	B	5.0	mg/L	300.0A
Ammonia	0.11		0.10	mg/L	350.1
Nitrate Nitrite as N	2.9		0.10	mg/L	353.2
Phosphorus, Total	0.38	B	0.050	mg/L	365.1
Chemical Oxygen Demand	45		20	mg/L	410.4
Total Alkalinity	77		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity	77		5.0	mg/L	SM 2320B
Total Suspended Solids	57		4.0	mg/L	SM 2540D
Nitrogen, Total	4.8		0.10	mg/L	Total Nitrogen
<b><i>Total Recoverable</i></b>					
Iron	8.6		0.10	mg/L	200.7 Rev 4.4
Lead	0.0034	J	0.0090	mg/L	200.7 Rev 4.4
Selenium	0.0078	J	0.015	mg/L	200.7 Rev 4.4
Zinc	0.017	J	0.020	mg/L	200.7 Rev 4.4
Potassium	7.0		3.0	mg/L	200.7 Rev 4.4
Calcium	24		0.20	mg/L	200.7 Rev 4.4
Magnesium	13		0.20	mg/L	200.7 Rev 4.4
Sodium	73	B	5.0	mg/L	200.7 Rev 4.4

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID Analyte	Client Sample ID Analyte	Result / Qualifier	Reporting Limit	Units	Method
<b>280-11648-2      UPCANYON</b>					
Field pH	8.46			SU	Field Sampling
HEM	3.7	J	5.0	mg/L	1664A
Bromide	0.16	J	0.20	mg/L	300.0A
Chloride	61		1.3	mg/L	300.0A
Sulfate	27	B	5.0	mg/L	300.0A
Ammonia	0.17		0.10	mg/L	350.1
Nitrate Nitrite as N	3.2		0.10	mg/L	353.2
Phosphorus, Total	0.58	B	0.050	mg/L	365.1
Chemical Oxygen Demand	29		20	mg/L	410.4
Total Alkalinity	31		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity	31		5.0	mg/L	SM 2320B
Total Suspended Solids	190		4.0	mg/L	SM 2540D
Nitrogen, Total	4.1		0.10	mg/L	Total Nitrogen
<b>Total Recoverable</b>					
Iron	41		0.10	mg/L	200.7 Rev 4.4
Zinc	0.058		0.020	mg/L	200.7 Rev 4.4
Potassium	6.1		3.0	mg/L	200.7 Rev 4.4
Calcium	11		0.20	mg/L	200.7 Rev 4.4
Magnesium	11		0.20	mg/L	200.7 Rev 4.4
Sodium	51	B	5.0	mg/L	200.7 Rev 4.4

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID Analyte	Client Sample ID Analyte	Result / Qualifier	Reporting Limit	Units	Method
280-11648-3	OCEAN WEST				
Field pH	7.92			SU	Field Sampling
HEM	3.5	J	5.0	mg/L	1664A
Bromide	67		2.3	mg/L	300.0A
Chloride	19000		130	mg/L	300.0A
Sulfate	2700	B	23	mg/L	300.0A
Ammonia	0.053	J	0.10	mg/L	350.1
Nitrate Nitrite as N	0.13		0.10	mg/L	353.2
Phosphorus, Total	0.22	B	0.050	mg/L	365.1
Chemical Oxygen Demand	450		20	mg/L	410.4
Total Alkalinity	120		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity	120		5.0	mg/L	SM 2320B
Total Suspended Solids	320		4.0	mg/L	SM 2540D
Nitrogen, Total	0.77		0.10	mg/L	Total Nitrogen
<b><i>Total Recoverable</i></b>					
Arsenic	0.0044	J	0.015	mg/L	200.7 Rev 4.4
Iron	18		0.10	mg/L	200.7 Rev 4.4
Lead	0.0058	J	0.0090	mg/L	200.7 Rev 4.4
Selenium	0.0064	J	0.015	mg/L	200.7 Rev 4.4
Zinc	0.047		0.020	mg/L	200.7 Rev 4.4
Potassium	470		3.0	mg/L	200.7 Rev 4.4
Calcium	370		0.20	mg/L	200.7 Rev 4.4
Magnesium	1100		0.20	mg/L	200.7 Rev 4.4
Sodium	10000	B	9.2	mg/L	200.7 Rev 4.4

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID Analyte	Client Sample ID Analyte	Result / Qualifier		Reporting Limit	Units	Method
280-11648-4	OCEAN EAST					
Mercury		0.000033	J	0.00020	mg/L	245.1
Field pH		8.06		SU		Field Sampling
HEM		4.0	J	5.0	mg/L	1664A
Bromide		67		2.3	mg/L	300.0A
Chloride		19000		130	mg/L	300.0A
Sulfate		2800	B	23	mg/L	300.0A
Ammonia		0.074	J	0.10	mg/L	350.1
Nitrate Nitrite as N		0.17		0.10	mg/L	353.2
Phosphorus, Total		0.34	B	0.050	mg/L	365.1
Chemical Oxygen Demand		410		20	mg/L	410.4
Total Alkalinity		120		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		120		5.0	mg/L	SM 2320B
Total Suspended Solids		340		4.0	mg/L	SM 2540D
Nitrogen, Total		0.41		0.10	mg/L	Total Nitrogen
<i>Total Recoverable</i>						
Iron		20		0.10	mg/L	200.7 Rev 4.4
Lead		0.0057	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.049		0.020	mg/L	200.7 Rev 4.4
Potassium		480		3.0	mg/L	200.7 Rev 4.4
Calcium		370		0.20	mg/L	200.7 Rev 4.4
Magnesium		1100		0.20	mg/L	200.7 Rev 4.4
Sodium		11000	B	9.2	mg/L	200.7 Rev 4.4

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID Analyte	Client Sample ID Analyte	Result / Qualifier	Reporting Limit	Units	Method
280-11648-5	OCEAN OUTLET				
Field pH	8.13			SU	Field Sampling
HEM	4.5	J	5.0	mg/L	1664A
Bromide	32		1.1	mg/L	300.0A
Chloride	9600		51	mg/L	300.0A
Sulfate	1300	B	12	mg/L	300.0A
Ammonia	0.055	J	0.10	mg/L	350.1
Nitrate Nitrite as N	1.9		0.10	mg/L	353.2
Phosphorus, Total	0.33	B	0.050	mg/L	365.1
Chemical Oxygen Demand	160		20	mg/L	410.4
Total Alkalinity	110		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity	110		5.0	mg/L	SM 2320B
Total Suspended Solids	320		4.0	mg/L	SM 2540D
Nitrogen, Total	2.8		0.10	mg/L	Total Nitrogen
<i>Total Recoverable</i>					
Iron	14		0.10	mg/L	200.7 Rev 4.4
Lead	0.0061	J	0.0090	mg/L	200.7 Rev 4.4
Zinc	0.037		0.020	mg/L	200.7 Rev 4.4
Potassium	200		3.0	mg/L	200.7 Rev 4.4
Calcium	190		0.20	mg/L	200.7 Rev 4.4
Magnesium	510		0.20	mg/L	200.7 Rev 4.4
Sodium	5000	B	5.0	mg/L	200.7 Rev 4.4

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-11648-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
HEM and SGT-HEM	TAL DEN	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL DEN		1664A 1664A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0A	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	

**Lab References:**

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

**Method References:**

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-11648-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Bowen, Heidi E	HEB
EPA 245.1	Stoltz, Katie	KS
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Gheorghe, Philip A	PAG
MCAWW 300.0A	Phan, Thu L	TLP
MCAWW 350.1	Stosak, Lara E	LES
MCAWW 353.2	Stosak, Lara E	LES
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Derosia, Marcia R	MRD
SM SM 2320B	Derosia, Marcia R	MRD
SM SM 2540D	Gheorghe, Philip A	PAG
EPA Total Nitrogen	Sullivan, Roxanne	RS

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-11648-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-11648-1	CULVERT	Water	01/13/2011 1915	01/17/2011 0830
280-11648-2	UPCANYON	Water	01/13/2011 1750	01/17/2011 0830
280-11648-3	OCEAN WEST	Water	01/13/2011 1745	01/17/2011 0830
280-11648-4	OCEAN EAST	Water	01/13/2011 1800	01/17/2011 0830
280-11648-5	OCEAN OUTLET	Water	01/13/2011 1815	01/17/2011 0830

## **SAMPLE RESULTS**

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: CULVERT

Lab Sample ID: 280-11648-1

Date Sampled: 01/13/2011 1915

Client Matrix: Water

Date Received: 01/17/2011 0830

**625 Semivolatile Organic Compounds (GC/MS)**

Method:	625	Analysis Batch: 280-49865	Instrument ID:	MSS_D
Preparation:	625	Prep Batch: 280-49365	Lab File ID:	D1503.D
Dilution:	1.0		Initial Weight/Volume:	953.6 mL
Date Analyzed:	01/21/2011 0049		Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831		Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0021	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00026	0.010
Pentachlorophenol	ND		0.021	0.060
Phenol	ND		0.0021	0.010
Surrogate	%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl	94		36 - 120	
2-Fluorophenol	89		30 - 120	
2,4,6-Tribromophenol	93		50 - 120	
Nitrobenzene-d5	105		45 - 120	
Phenol-d5	92		36 - 120	
Terphenyl-d14	86		52 - 120	

## Analytical Data

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: UPCANYON

Lab Sample ID: 280-11648-2

Date Sampled: 01/13/2011 1750

Client Matrix: Water

Date Received: 01/17/2011 0830

### 625 Semivolatile Organic Compounds (GC/MS)

Method:	625	Analysis Batch:	280-49865	Instrument ID:	MSS_D
Preparation:	625	Prep Batch:	280-49365	Lab File ID:	D1504.D
Dilution:	1.0			Initial Weight/Volume:	1057.4 mL
Date Analyzed:	01/21/2011 0108			Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0095	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010
Surrogate	%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl	90		36 - 120	
2-Fluorophenol	85		30 - 120	
2,4,6-Tribromophenol	91		50 - 120	
Nitrobenzene-d5	91		45 - 120	
Phenol-d5	89		36 - 120	
Terphenyl-d14	108		52 - 120	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN WEST

Lab Sample ID: 280-11648-3

Date Sampled: 01/13/2011 1745

Client Matrix: Water

Date Received: 01/17/2011 0830

**625 Semivolatile Organic Compounds (GC/MS)**

Method:	625	Analysis Batch: 280-49865	Instrument ID:	MSS_D
Preparation:	625	Prep Batch: 280-49365	Lab File ID:	D1505.D
Dilution:	1.0		Initial Weight/Volume:	1011.1 mL
Date Analyzed:	01/21/2011 0128		Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831		Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.0099	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	83		36 - 120
2-Fluorophenol	88		30 - 120
2,4,6-Tribromophenol	84		50 - 120
Nitrobenzene-d5	92		45 - 120
Phenol-d5	90		36 - 120
Terphenyl-d14	93		52 - 120

## Analytical Data

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN EAST

Lab Sample ID: 280-11648-4

Date Sampled: 01/13/2011 1800

Client Matrix: Water

Date Received: 01/17/2011 0830

### 625 Semivolatile Organic Compounds (GC/MS)

Method:	625	Analysis Batch: 280-49865	Instrument ID:	MSS_D
Preparation:	625	Prep Batch: 280-49365	Lab File ID:	D1506.D
Dilution:	1.0		Initial Weight/Volume:	975.1 mL
Date Analyzed:	01/21/2011 0147		Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831		Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0021	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00026	0.010
Pentachlorophenol	ND		0.021	0.060
Phenol	ND		0.0021	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	101		36 - 120
2-Fluorophenol	101		30 - 120
2,4,6-Tribromophenol	99		50 - 120
Nitrobenzene-d5	109		45 - 120
Phenol-d5	105		36 - 120
Terphenyl-d14	90		52 - 120

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN OUTLET

Lab Sample ID: 280-11648-5

Date Sampled: 01/13/2011 1815

Client Matrix: Water

Date Received: 01/17/2011 0830

**625 Semivolatile Organic Compounds (GC/MS)**

Method:	625	Analysis Batch: 280-49865	Instrument ID:	MSS_D
Preparation:	625	Prep Batch: 280-49365	Lab File ID:	D1507.D
Dilution:	1.0		Initial Weight/Volume:	859.8 mL
Date Analyzed:	01/21/2011 0207		Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831		Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0023	0.010
Benzoic acid	ND		0.012	0.050
p-Cresol	ND		0.00029	0.010
Pentachlorophenol	ND		0.023	0.060
Phenol	ND		0.0023	0.010
Surrogate	%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl	94		36 - 120	
2-Fluorophenol	95		30 - 120	
2,4,6-Tribromophenol	97		50 - 120	
Nitrobenzene-d5	97		45 - 120	
Phenol-d5	98		36 - 120	
Terphenyl-d14	90		52 - 120	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: CULVERT

Lab Sample ID: 280-11648-1

Date Sampled: 01/13/2011 1915

Client Matrix: Water

Date Received: 01/17/2011 0830

**200.7 Rev 4.4 Metals (ICP)-Total Recoverable**

Method:	200.7 Rev 4.4	Analysis Batch:	280-49542	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/18/2011 2014			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	8.6		0.022	0.10
Lead	0.0034	J	0.0026	0.0090
Selenium	0.0078	J	0.0049	0.015
Zinc	0.017	J	0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	7.0		0.24	3.0
Calcium	24		0.034	0.20
Magnesium	13		0.011	0.20
Sodium	73	B	0.092	5.0

**245.1 Mercury (CVAA)**

Method:	245.1	Analysis Batch:	280-49379	Instrument ID:	MT_033
Preparation:	245.1	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1608			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

## Analytical Data

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: UPCANYON

Lab Sample ID: 280-11648-2

Date Sampled: 01/13/2011 1750

Client Matrix: Water

Date Received: 01/17/2011 0830

### 200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Method:	200.7 Rev 4.4	Analysis Batch:	280-49542	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/18/2011 2017			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	41		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.058		0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	6.1		0.24	3.0
Calcium	11		0.034	0.20
Magnesium	11		0.011	0.20
Sodium	51	B	0.092	5.0

### 245.1 Mercury (CVAA)

Method:	245.1	Analysis Batch:	280-49379	Instrument ID:	MT_033
Preparation:	245.1	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1611			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

## Analytical Data

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN WEST

Lab Sample ID: 280-11648-3

Date Sampled: 01/13/2011 1745

Client Matrix: Water

Date Received: 01/17/2011 0830

### 200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Method:	200.7 Rev 4.4	Analysis Batch:	280-49542	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/18/2011 2019			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0044	J	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	18		0.022	0.10
Lead	0.0058	J	0.0026	0.0090
Selenium	0.0064	J	0.0049	0.015
Zinc	0.047		0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	470		0.24	3.0
Calcium	370		0.034	0.20
Magnesium	1100		0.011	0.20

Method:	200.7 Rev 4.4	Analysis Batch:	280-49660	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011911.asc
Dilution:	100			Initial Weight/Volume:	50 mL
Date Analyzed:	01/19/2011 1918			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Sodium	10000	B	9.2	9.2

### 245.1 Mercury (CVAA)

Method:	245.1	Analysis Batch:	280-49379	Instrument ID:	MT_033
Preparation:	245.1	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1613			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

## Analytical Data

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN EAST

Lab Sample ID: 280-11648-4

Date Sampled: 01/13/2011 1800

Client Matrix: Water

Date Received: 01/17/2011 0830

### 200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Method:	200.7 Rev 4.4	Analysis Batch:	280-49542	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/18/2011 2022			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	20		0.022	0.10
Lead	0.0057	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.049		0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	480		0.24	3.0
Calcium	370		0.034	0.20
Magnesium	1100		0.011	0.20

Method:	200.7 Rev 4.4	Analysis Batch:	280-49660	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011911.asc
Dilution:	100			Initial Weight/Volume:	50 mL
Date Analyzed:	01/19/2011 1920			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Sodium	11000	B	9.2	9.2

### 245.1 Mercury (CVAA)

Method:	245.1	Analysis Batch:	280-49379	Instrument ID:	MT_033
Preparation:	245.1	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1620			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000033	J	0.000027	0.00020

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

Client Sample ID: OCEAN OUTLET

Lab Sample ID: 280-11648-5

Date Sampled: 01/13/2011 1815

Client Matrix: Water

Date Received: 01/17/2011 0830

**200.7 Rev 4.4 Metals (ICP)-Total Recoverable**

Method:	200.7 Rev 4.4	Analysis Batch:	280-49542	Instrument ID:	MT_026
Preparation:	200.7	Prep Batch:	280-49321	Lab File ID:	26a011811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/18/2011 2026			Final Weight/Volume:	50 mL
Date Prepared:	01/17/2011 1427				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	14		0.022	0.10
Lead	0.0061	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.037		0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	200		0.24	3.0
Calcium	190		0.034	0.20
Magnesium	510		0.011	0.20
Sodium	5000	B	0.092	5.0

**245.1 Mercury (CVAA)**

Method:	245.1	Analysis Batch:	280-49379	Instrument ID:	MT_033
Preparation:	245.1	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1622			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**General Chemistry**

Client Sample ID:	CULVERT							
Lab Sample ID:	280-11648-1							
Client Matrix:	Water							
Analyte	Result	Qual	Units	MDL	RL	Dil	Method	
HEM	5.1		mg/L	1.3	5.0	1.0	1664A	
	Analysis Batch: 280-49297	Date Analyzed: 01/17/2011 1223						
	Prep Batch: 280-49286	Date Prepared: 01/17/2011 1146						
Bromide	0.73		mg/L	0.11	0.20	1.0	300.0A	
	Analysis Batch: 280-49632	Date Analyzed: 01/17/2011 1910						
Chloride	95		mg/L	1.3	1.3	5.0	300.0A	
	Analysis Batch: 280-49632	Date Analyzed: 01/18/2011 1105						
Sulfate	45	B	mg/L	0.23	5.0	1.0	300.0A	
	Analysis Batch: 280-49632	Date Analyzed: 01/17/2011 1910						
Ammonia	0.11		mg/L	0.022	0.10	1.0	350.1	
	Analysis Batch: 280-49479	Date Analyzed: 01/18/2011 1452						
Nitrate Nitrite as N	2.9		mg/L	0.019	0.10	1.0	353.2	
	Analysis Batch: 280-49480	Date Analyzed: 01/18/2011 1425						
Phosphorus, Total	0.38	B	mg/L	0.0050	0.050	1.0	365.1	
	Analysis Batch: 280-49895	Date Analyzed: 01/21/2011 0856						
	Prep Batch: 280-49680	Date Prepared: 01/20/2011 0938						
Chemical Oxygen Demand	45		mg/L	4.1	20	1.0	410.4	
	Analysis Batch: 280-49821	Date Analyzed: 01/19/2011 1737						
Total Alkalinity	77		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444	Date Analyzed: 01/17/2011 2027						
Bicarbonate Alkalinity	77		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444	Date Analyzed: 01/17/2011 2027						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444	Date Analyzed: 01/17/2011 2027						
Total Suspended Solids	57		mg/L	2.8	4.0	1.0	SM 2540D	
	Analysis Batch: 280-49449	Date Analyzed: 01/18/2011 1349						
Nitrogen, Total	4.8		mg/L	0.042	0.10	1.0	Total Nitrogen	
	Analysis Batch: 280-49935	Date Analyzed: 01/21/2011 1207						

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**General Chemistry**

Client Sample ID:	UPCANYON							
Lab Sample ID:	280-11648-2							
Client Matrix:	Water							
Analyte	Result	Qual	Units	MDL	RL	Dil	Method	
HEM	3.7	J	mg/L	1.3	5.0	1.0	1664A	
	Analysis Batch: 280-49297		Date Analyzed: 01/17/2011 1223					
	Prep Batch: 280-49286		Date Prepared: 01/17/2011 1146					
Bromide	0.16	J	mg/L	0.11	0.20	1.0	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/17/2011 1927					
Chloride	61		mg/L	1.3	1.3	5.0	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/18/2011 1122					
Sulfate	27	B	mg/L	0.23	5.0	1.0	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/17/2011 1927					
Ammonia	0.17		mg/L	0.022	0.10	1.0	350.1	
	Analysis Batch: 280-49479		Date Analyzed: 01/18/2011 1453					
Nitrate Nitrite as N	3.2		mg/L	0.019	0.10	1.0	353.2	
	Analysis Batch: 280-49480		Date Analyzed: 01/18/2011 1426					
Phosphorus, Total	0.58	B	mg/L	0.0050	0.050	1.0	365.1	
	Analysis Batch: 280-49895		Date Analyzed: 01/21/2011 0856					
	Prep Batch: 280-49680		Date Prepared: 01/20/2011 0938					
Chemical Oxygen Demand	29		mg/L	4.1	20	1.0	410.4	
	Analysis Batch: 280-49489		Date Analyzed: 01/18/2011 1729					
Total Alkalinity	31		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2034					
Bicarbonate Alkalinity	31		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2034					
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2034					
Total Suspended Solids	190		mg/L	2.8	4.0	1.0	SM 2540D	
	Analysis Batch: 280-49449		Date Analyzed: 01/18/2011 1349					
Nitrogen, Total	4.1		mg/L	0.042	0.10	1.0	Total Nitrogen	
	Analysis Batch: 280-49935		Date Analyzed: 01/21/2011 1207					

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**General Chemistry**

Client Sample ID:	OCEAN WEST							
Lab Sample ID:	280-11648-3							
Client Matrix:	Water							
Analyte	Result	Qual	Units	MDL	RL	Dil	Method	
HEM	3.5	J	mg/L	1.3	5.0	1.0	1664A	
	Analysis Batch: 280-49297		Date Analyzed: 01/17/2011 1223					
	Prep Batch: 280-49286		Date Prepared: 01/17/2011 1146					
Bromide	67		mg/L	2.3	2.3	20	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/17/2011 1945					
Chloride	19000		mg/L	130	130	500	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/18/2011 1157					
Sulfate	2700	B	mg/L	23	23	100	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/18/2011 1140					
Ammonia	0.053	J	mg/L	0.022	0.10	1.0	350.1	
	Analysis Batch: 280-49479		Date Analyzed: 01/18/2011 1447					
Nitrate Nitrite as N	0.13		mg/L	0.019	0.10	1.0	353.2	
	Analysis Batch: 280-49480		Date Analyzed: 01/18/2011 1428					
Phosphorus, Total	0.22	B	mg/L	0.0050	0.050	1.0	365.1	
	Analysis Batch: 280-49895		Date Analyzed: 01/21/2011 0856					
	Prep Batch: 280-49680		Date Prepared: 01/20/2011 0938					
Chemical Oxygen Demand	450		mg/L	20	20	5.0	410.4	
	Analysis Batch: 280-49821		Date Analyzed: 01/19/2011 1737					
Total Alkalinity	120		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2058					
Bicarbonate Alkalinity	120		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2058					
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2058					
Total Suspended Solids	320		mg/L	3.7	4.0	1.0	SM 2540D	
	Analysis Batch: 280-49449		Date Analyzed: 01/18/2011 1349					
Nitrogen, Total	0.77		mg/L	0.042	0.10	1.0	Total Nitrogen	
	Analysis Batch: 280-49935		Date Analyzed: 01/21/2011 1207					

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**General Chemistry**

Client Sample ID:	OCEAN EAST							
Lab Sample ID:	280-11648-4							
Client Matrix:	Water							
Analyte	Result	Qual	Units	MDL	RL	Dil	Method	
HEM	4.0	J	mg/L	1.6	5.0	1.0	1664A	
	Analysis Batch: 280-49297		Date Analyzed: 01/17/2011 1223					
	Prep Batch: 280-49286		Date Prepared: 01/17/2011 1146					
Bromide	67		mg/L	2.3	2.3	20	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/17/2011 2002					
Chloride	19000		mg/L	130	130	500	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/18/2011 1231					
Sulfate	2800	B	mg/L	23	23	100	300.0A	
	Analysis Batch: 280-49632		Date Analyzed: 01/18/2011 1214					
Ammonia	0.074	J	mg/L	0.022	0.10	1.0	350.1	
	Analysis Batch: 280-49479		Date Analyzed: 01/18/2011 1455					
Nitrate Nitrite as N	0.17		mg/L	0.019	0.10	1.0	353.2	
	Analysis Batch: 280-49480		Date Analyzed: 01/18/2011 1429					
Phosphorus, Total	0.34	B	mg/L	0.0050	0.050	1.0	365.1	
	Analysis Batch: 280-49895		Date Analyzed: 01/21/2011 0856					
	Prep Batch: 280-49680		Date Prepared: 01/20/2011 0938					
Chemical Oxygen Demand	410		mg/L	20	20	5.0	410.4	
	Analysis Batch: 280-49821		Date Analyzed: 01/19/2011 1737					
Total Alkalinity	120		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2106					
Bicarbonate Alkalinity	120		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2106					
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B	
	Analysis Batch: 280-49444		Date Analyzed: 01/17/2011 2106					
Total Suspended Solids	340		mg/L	3.7	4.0	1.0	SM 2540D	
	Analysis Batch: 280-49449		Date Analyzed: 01/18/2011 1349					
Nitrogen, Total	0.41		mg/L	0.042	0.10	1.0	Total Nitrogen	
	Analysis Batch: 280-49935		Date Analyzed: 01/21/2011 1207					

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**General Chemistry**

Client Sample ID: OCEAN OUTLET

Lab Sample ID: 280-11648-5

Date Sampled: 01/13/2011 1815

Client Matrix: Water

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	4.5	J	mg/L	1.3	5.0	1.0	1664A
	Analysis Batch: 280-49297		Date Analyzed:	01/17/2011 1223			
	Prep Batch: 280-49286		Date Prepared:	01/17/2011 1146			
Bromide	32		mg/L	1.1	1.1	10	300.0A
	Analysis Batch: 280-49632		Date Analyzed:	01/17/2011 2019			
Chloride	9600		mg/L	51	51	200	300.0A
	Analysis Batch: 280-49632		Date Analyzed:	01/18/2011 1306			
Sulfate	1300	B	mg/L	12	12	50	300.0A
	Analysis Batch: 280-49632		Date Analyzed:	01/18/2011 1249			
Ammonia	0.055	J	mg/L	0.022	0.10	1.0	350.1
	Analysis Batch: 280-49479		Date Analyzed:	01/18/2011 1505			
Nitrate Nitrite as N	1.9		mg/L	0.019	0.10	1.0	353.2
	Analysis Batch: 280-49480		Date Analyzed:	01/18/2011 1431			
Phosphorus, Total	0.33	B	mg/L	0.0050	0.050	1.0	365.1
	Analysis Batch: 280-49895		Date Analyzed:	01/21/2011 0856			
	Prep Batch: 280-49680		Date Prepared:	01/20/2011 0938			
Chemical Oxygen Demand	160		mg/L	8.1	20	2.0	410.4
	Analysis Batch: 280-49489		Date Analyzed:	01/18/2011 1729			
Total Alkalinity	110		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-49444		Date Analyzed:	01/17/2011 2114			
Bicarbonate Alkalinity	110		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-49444		Date Analyzed:	01/17/2011 2114			
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-49444		Date Analyzed:	01/17/2011 2114			
Total Suspended Solids	320		mg/L	3.7	4.0	1.0	SM 2540D
	Analysis Batch: 280-49449		Date Analyzed:	01/18/2011 1349			
Nitrogen, Total	2.8		mg/L	0.042	0.10	1.0	Total Nitrogen
	Analysis Batch: 280-49935		Date Analyzed:	01/21/2011 1207			

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**Field Service / Mobile Lab**

Client Sample ID: CULVERT

Lab Sample ID: 280-11648-1

Date Sampled: 01/13/2011 1915

Client Matrix: Water

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Field pH	8.14		SU	1.0	Field Sampling	280-49270	01/13/2011 1915	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**Field Service / Mobile Lab**

Client Sample ID: UPCANYON

Lab Sample ID: 280-11648-2

Date Sampled: 01/13/2011 1750

Client Matrix: Water

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Field pH	8.46		SU	1.0	Field Sampling	280-49270	01/13/2011 1750	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**Field Service / Mobile Lab**

Client Sample ID: OCEAN WEST

Lab Sample ID: 280-11648-3

Date Sampled: 01/13/2011 1745

Client Matrix: Water

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Field pH	7.92		SU	1.0	Field Sampling	280-49270	01/13/2011 1745	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**Field Service / Mobile Lab**

Client Sample ID: OCEAN EAST

Lab Sample ID: 280-11648-4

Client Matrix: Water

Date Sampled: 01/13/2011 1800

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Field pH	8.06		SU	1.0	Field Sampling	280-49270	01/13/2011 1800	

**Analytical Data**

Client: Waste Management

Job Number: 280-11648-1

**Field Service / Mobile Lab**

Client Sample ID: OCEAN OUTLET

Lab Sample ID: 280-11648-5

Date Sampled: 01/13/2011 1815

Client Matrix: Water

Date Received: 01/17/2011 0830

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.13		SU	1.0	Field Sampling	280-49270	01/13/2011 1815

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-11648-1

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS Semi VOA	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals	B	Compound was found in the blank and sample.
	^	Instrument related QC exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# **QUALITY CONTROL RESULTS**

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS Semi VOA</b>					
<b>Prep Batch: 280-49365</b>					
LCS 280-49365/2-A	Lab Control Sample	T	Water	625	
LCSD 280-49365/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-49365/1-A	Method Blank	T	Water	625	
280-11648-1	CULVERT	T	Water	625	
280-11648-2	UPCANYON	T	Water	625	
280-11648-3	OCEAN WEST	T	Water	625	
280-11648-4	OCEAN EAST	T	Water	625	
280-11648-5	OCEAN OUTLET	T	Water	625	
<b>Analysis Batch: 280-49865</b>					
LCS 280-49365/2-A	Lab Control Sample	T	Water	625	280-49365
LCSD 280-49365/3-A	Lab Control Sample Duplicate	T	Water	625	280-49365
MB 280-49365/1-A	Method Blank	T	Water	625	280-49365
280-11648-1	CULVERT	T	Water	625	280-49365
280-11648-2	UPCANYON	T	Water	625	280-49365
280-11648-3	OCEAN WEST	T	Water	625	280-49365
280-11648-4	OCEAN EAST	T	Water	625	280-49365
280-11648-5	OCEAN OUTLET	T	Water	625	280-49365

Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-49281</b>					
LCS 280-49281/2-A	Lab Control Sample	T	Water	245.1	
MB 280-49281/1-A	Method Blank	T	Water	245.1	
280-11648-1	CULVERT	T	Water	245.1	
280-11648-2	UPCANYON	T	Water	245.1	
280-11648-3	OCEAN WEST	T	Water	245.1	
280-11648-3MS	Matrix Spike	T	Water	245.1	
280-11648-3MSD	Matrix Spike Duplicate	T	Water	245.1	
280-11648-4	OCEAN EAST	T	Water	245.1	
280-11648-5	OCEAN OUTLET	T	Water	245.1	
<b>Prep Batch: 280-49321</b>					
LCS 280-49321/2-A	Lab Control Sample	R	Water	200.7	
MB 280-49321/1-A	Method Blank	R	Water	200.7	
280-11644-C-7-B MS	Matrix Spike	R	Water	200.7	
280-11644-C-7-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-11648-1	CULVERT	R	Water	200.7	
280-11648-2	UPCANYON	R	Water	200.7	
280-11648-3	OCEAN WEST	R	Water	200.7	
280-11648-4	OCEAN EAST	R	Water	200.7	
280-11648-5	OCEAN OUTLET	R	Water	200.7	
280-11648-5MS	Matrix Spike	R	Water	200.7	
280-11648-5MSD	Matrix Spike Duplicate	R	Water	200.7	
<b>Analysis Batch: 280-49379</b>					
LCS 280-49281/2-A	Lab Control Sample	T	Water	245.1	280-49281
MB 280-49281/1-A	Method Blank	T	Water	245.1	280-49281
280-11648-1	CULVERT	T	Water	245.1	280-49281
280-11648-2	UPCANYON	T	Water	245.1	280-49281
280-11648-3	OCEAN WEST	T	Water	245.1	280-49281
280-11648-3MS	Matrix Spike	T	Water	245.1	280-49281
280-11648-3MSD	Matrix Spike Duplicate	T	Water	245.1	280-49281
280-11648-4	OCEAN EAST	T	Water	245.1	280-49281
280-11648-5	OCEAN OUTLET	T	Water	245.1	280-49281

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-49542</b>					
LCS 280-49321/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-49321
MB 280-49321/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-49321
280-11644-C-7-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-49321
280-11644-C-7-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-49321
280-11648-1	CULVERT	R	Water	200.7 Rev 4.4	280-49321
280-11648-2	UPCANYON	R	Water	200.7 Rev 4.4	280-49321
280-11648-3	OCEAN WEST	R	Water	200.7 Rev 4.4	280-49321
280-11648-4	OCEAN EAST	R	Water	200.7 Rev 4.4	280-49321
280-11648-5	OCEAN OUTLET	R	Water	200.7 Rev 4.4	280-49321
280-11648-5MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-49321
280-11648-5MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-49321
<b>Analysis Batch:280-49660</b>					
280-11648-3	OCEAN WEST	R	Water	200.7 Rev 4.4	280-49321
280-11648-4	OCEAN EAST	R	Water	200.7 Rev 4.4	280-49321

#### Report Basis

R = Total Recoverable

T = Total

#### Field Service / Mobile Lab

Analysis Batch:280-49270				
280-11648-1	CULVERT	T	Water	Field Sampling
280-11648-2	UPCANYON	T	Water	Field Sampling
280-11648-3	OCEAN WEST	T	Water	Field Sampling
280-11648-4	OCEAN EAST	T	Water	Field Sampling
280-11648-5	OCEAN OUTLET	T	Water	Field Sampling

#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Prep Batch: 280-49286</b>					
LCS 280-49286/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-49286/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-49286/1-A	Method Blank	T	Water	1664A	
280-11648-1	CULVERT	T	Water	1664A	
280-11648-2	UPCANYON	T	Water	1664A	
280-11648-3	OCEAN WEST	T	Water	1664A	
280-11648-4	OCEAN EAST	T	Water	1664A	
280-11648-5	OCEAN OUTLET	T	Water	1664A	
<b>Analysis Batch:280-49297</b>					
LCS 280-49286/2-A	Lab Control Sample	T	Water	1664A	280-49286
LCSD 280-49286/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-49286
MB 280-49286/1-A	Method Blank	T	Water	1664A	280-49286
280-11648-1	CULVERT	T	Water	1664A	280-49286
280-11648-2	UPCANYON	T	Water	1664A	280-49286
280-11648-3	OCEAN WEST	T	Water	1664A	280-49286
280-11648-4	OCEAN EAST	T	Water	1664A	280-49286
280-11648-5	OCEAN OUTLET	T	Water	1664A	280-49286
<b>Analysis Batch:280-49444</b>					
LCS 280-49444/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-49444/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-49444/6	Method Blank	T	Water	SM 2320B	
280-11644-A-1 DU	Duplicate	T	Water	SM 2320B	
280-11648-1	CULVERT	T	Water	SM 2320B	
280-11648-2	UPCANYON	T	Water	SM 2320B	
280-11648-3	OCEAN WEST	T	Water	SM 2320B	
280-11648-4	OCEAN EAST	T	Water	SM 2320B	
280-11648-5	OCEAN OUTLET	T	Water	SM 2320B	
<b>Analysis Batch:280-49449</b>					
LCS 280-49449/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-49449/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-49449/1	Method Blank	T	Water	SM 2540D	
280-11616-C-1 DU	Duplicate	T	Water	SM 2540D	
280-11648-1	CULVERT	T	Water	SM 2540D	
280-11648-2	UPCANYON	T	Water	SM 2540D	
280-11648-3	OCEAN WEST	T	Water	SM 2540D	
280-11648-4	OCEAN EAST	T	Water	SM 2540D	
280-11648-5	OCEAN OUTLET	T	Water	SM 2540D	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-49479</b>					
LCS 280-49479/69	Lab Control Sample	T	Water	350.1	
LCSD 280-49479/70	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-49479/68	Method Blank	T	Water	350.1	
280-11648-1	CULVERT	T	Water	350.1	
280-11648-2	UPCANYON	T	Water	350.1	
280-11648-3	OCEAN WEST	T	Water	350.1	
280-11648-3MS	Matrix Spike	T	Water	350.1	
280-11648-3MSD	Matrix Spike Duplicate	T	Water	350.1	
280-11648-4	OCEAN EAST	T	Water	350.1	
280-11648-5	OCEAN OUTLET	T	Water	350.1	
<b>Analysis Batch:280-49480</b>					
LCS 280-49480/25	Lab Control Sample	T	Water	353.2	
LCSD 280-49480/26	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-49480/24	Method Blank	T	Water	353.2	
280-11561-E-7 MS	Matrix Spike	T	Water	353.2	
280-11561-E-7 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-11648-1	CULVERT	T	Water	353.2	
280-11648-2	UPCANYON	T	Water	353.2	
280-11648-3	OCEAN WEST	T	Water	353.2	
280-11648-4	OCEAN EAST	T	Water	353.2	
280-11648-5	OCEAN OUTLET	T	Water	353.2	
<b>Analysis Batch:280-49489</b>					
LCS 280-49489/3	Lab Control Sample	T	Water	410.4	
LCSD 280-49489/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-49489/5	Method Blank	T	Water	410.4	
280-11648-2	UPCANYON	T	Water	410.4	
280-11648-2MS	Matrix Spike	T	Water	410.4	
280-11648-2MSD	Matrix Spike Duplicate	T	Water	410.4	
280-11648-5	OCEAN OUTLET	T	Water	410.4	
<b>Analysis Batch:280-49632</b>					
LCS 280-49632/4	Lab Control Sample	T	Water	300.0A	
LCSD 280-49632/5	Lab Control Sample Duplicate	T	Water	300.0A	
MB 280-49632/6	Method Blank	T	Water	300.0A	
280-11561-A-5 DU	Duplicate	T	Water	300.0A	
280-11561-A-5 MS	Matrix Spike	T	Water	300.0A	
280-11561-A-5 MSD	Matrix Spike Duplicate	T	Water	300.0A	
280-11648-1	CULVERT	T	Water	300.0A	
280-11648-2	UPCANYON	T	Water	300.0A	
280-11648-3	OCEAN WEST	T	Water	300.0A	
280-11648-4	OCEAN EAST	T	Water	300.0A	
280-11648-5	OCEAN OUTLET	T	Water	300.0A	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Prep Batch: 280-49680</b>					
LCS 280-49680/1-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-49680/2-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-49680/3-A	Method Blank	T	Water	365.2/365.3/365	
280-11648-1	CULVERT	T	Water	365.2/365.3/365	
280-11648-2	UPCANYON	T	Water	365.2/365.3/365	
280-11648-3	OCEAN WEST	T	Water	365.2/365.3/365	
280-11648-4	OCEAN EAST	T	Water	365.2/365.3/365	
280-11648-5	OCEAN OUTLET	T	Water	365.2/365.3/365	
280-11648-5MS	Matrix Spike	T	Water	365.2/365.3/365	
280-11648-5MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
<b>Analysis Batch:280-49821</b>					
LCS 280-49821/3	Lab Control Sample	T	Water	410.4	
LCSD 280-49821/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-49821/5	Method Blank	T	Water	410.4	
280-11648-1	CULVERT	T	Water	410.4	
280-11648-1MS	Matrix Spike	T	Water	410.4	
280-11648-1MSD	Matrix Spike Duplicate	T	Water	410.4	
280-11648-3	OCEAN WEST	T	Water	410.4	
280-11648-4	OCEAN EAST	T	Water	410.4	
<b>Analysis Batch:280-49895</b>					
LCS 280-49680/1-A	Lab Control Sample	T	Water	365.1	280-49680
LCSD 280-49680/2-A	Lab Control Sample Duplicate	T	Water	365.1	280-49680
MB 280-49680/3-A	Method Blank	T	Water	365.1	280-49680
280-11648-1	CULVERT	T	Water	365.1	280-49680
280-11648-2	UPCANYON	T	Water	365.1	280-49680
280-11648-3	OCEAN WEST	T	Water	365.1	280-49680
280-11648-4	OCEAN EAST	T	Water	365.1	280-49680
280-11648-5	OCEAN OUTLET	T	Water	365.1	280-49680
280-11648-5MS	Matrix Spike	T	Water	365.1	280-49680
280-11648-5MSD	Matrix Spike Duplicate	T	Water	365.1	280-49680
<b>Analysis Batch:280-49935</b>					
MB 280-49935/1	Method Blank	T	Water	Total Nitrogen	
280-11648-1	CULVERT	T	Water	Total Nitrogen	
280-11648-2	UPCANYON	T	Water	Total Nitrogen	
280-11648-3	OCEAN WEST	T	Water	Total Nitrogen	
280-11648-4	OCEAN EAST	T	Water	Total Nitrogen	
280-11648-5	OCEAN OUTLET	T	Water	Total Nitrogen	

#### Report Basis

T = Total

TestAmerica Denver

**Quality Control Results**

Client: Waste Management

Job Number: 280-11648-1

**Surrogate Recovery Report****625 Semivolatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-11648-1	CULVERT	94	89	93	105	92	86
280-11648-2	UPCANYON	90	85	91	91	89	108
280-11648-3	OCEAN WEST	83	88	84	92	90	93
280-11648-4	OCEAN EAST	101	101	99	109	105	90
280-11648-5	OCEAN OUTLET	94	95	97	97	98	90
MB 280-49365/1-A		67	92	84	94	91	111
LCS 280-49365/2-A		94	97	100	93	102	110
LCSD 280-49365/3-A		95	84	110	98	98	117

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
TBP = 2,4,6-Tribromophenol	50-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Method Blank - Batch: 280-49365****Method: 625****Preparation: 625**

Lab Sample ID: MB 280-49365/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0030  
Date Prepared: 01/17/2011 1831

Analysis Batch: 280-49865  
Prep Batch: 280-49365  
Units: mg/L

Instrument ID: MSS\_D  
Lab File ID: D1502.D  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010
Surrogate	% Rec		Acceptance Limits	
2-Fluorobiphenyl	67		36 - 120	
2-Fluorophenol	92		30 - 120	
2,4,6-Tribromophenol	84		50 - 120	
Nitrobenzene-d5	94		45 - 120	
Phenol-d5	91		36 - 120	
Terphenyl-d14	111		52 - 120	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-49365**

**Method: 625**

**Preparation: 625**

LCS Lab Sample ID:	LCS 280-49365/2-A	Analysis Batch:	280-49865	Instrument ID:	MSS_D
Client Matrix:	Water	Prep Batch:	280-49365	Lab File ID:	D1475.D
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/20/2011 1546			Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831			Injection Volume:	0.5 uL

LCSD Lab Sample ID:	LCSD 280-49365/3-A	Analysis Batch:	280-49865	Instrument ID:	MSS_D
Client Matrix:	Water	Prep Batch:	280-49365	Lab File ID:	D1476.D
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/20/2011 1605			Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831			Injection Volume:	0.5 uL

Analyte	% Rec.						
	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acenaphthene	96	98	47 - 120	3	30		
Acenaphthylene	98	102	33 - 120	4	30		
Anthracene	106	100	52 - 120	6	30		
Benzidine	97	109	10 - 218	12	50		
Benzo[a]anthracene	102	108	54 - 120	5	30		
Benzo[b]fluoranthene	99	107	51 - 120	8	90		
Benzo[k]fluoranthene	85	94	49 - 120	10	50		
Benzo[a]pyrene	84	89	39 - 120	6	73		
Bis(2-chloroethoxy)methane	86	95	50 - 120	9	30		
Bis(2-chloroethyl)ether	91	88	35 - 120	4	30		
Bis(2-ethylhexyl) phthalate	102	97	56 - 120	4	30		
4-Bromophenyl phenyl ether	115	101	53 - 120	14	34		
Butyl benzyl phthalate	104	111	53 - 120	7	30		
4-Chloro-3-methylphenol	105	93	57 - 120	12	30		
2-Chloronaphthalene	94	97	60 - 118	3	30		
2-Chlorophenol	102	95	34 - 120	7	30		
4-Chlorophenyl phenyl ether	98	100	51 - 120	2	30		
Chrysene	103	105	51 - 120	2	30		
Dibenz(a,h)anthracene	99	85	45 - 120	15	78		
Di-n-butyl phthalate	109	99	57 - 118	10	30		
1,2-Dichlorobenzene	75	72	32 - 120	4	42		
1,3-Dichlorobenzene	71	68	23 - 120	4	47		
1,4-Dichlorobenzene	74	70	24 - 120	5	49		
3,3'-Dichlorobenzidine	62	63	18 - 120	3	50	J	
2,4-Dichlorophenol	88	94	46 - 120	6	30		
Diethyl phthalate	102	103	59 - 114	0	30		
2,4-Dimethylphenol	77	82	44 - 119	7	35		
Dimethyl phthalate	104	106	58 - 112	1	30		
4,6-Dinitro-2-methylphenol	101	94	40 - 120	8	55		
2,4-Dinitrophenol	89	93	20 - 121	5	61		
2,4-Dinitrotoluene	105	105	57 - 120	0	35		
2,6-Dinitrotoluene	95	101	56 - 120	6	30		
Di-n-octyl phthalate	105	111	56 - 120	5	30		
Fluoranthene	113	113	58 - 120	1	30		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-49365**

**Method: 625**

**Preparation: 625**

LCS Lab Sample ID:	LCS 280-49365/2-A	Analysis Batch:	280-49865	Instrument ID:	MSS_D
Client Matrix:	Water	Prep Batch:	280-49365	Lab File ID:	D1475.D
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/20/2011 1546			Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831			Injection Volume:	0.5 uL

LCSD Lab Sample ID:	LCSD 280-49365/3-A	Analysis Batch:	280-49865	Instrument ID:	MSS_D
Client Matrix:	Water	Prep Batch:	280-49365	Lab File ID:	D1476.D
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/20/2011 1605			Final Weight/Volume:	1000 uL
Date Prepared:	01/17/2011 1831			Injection Volume:	0.5 uL

Analyte	% Rec.						
	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Fluorene	100	103	59 - 120	3	30		
Hexachlorobenzene	105	93	53 - 120	12	30		
Hexachlorobutadiene	74	72	27 - 116	4	41		
Hexachlorocyclopentadiene	50	52	10 - 120	5	82	J	J
Hexachloroethane	66	64	40 - 113	3	52		
Indeno[1,2,3-cd]pyrene	122	103	50 - 120	17	73	*	
Isophorone	91	99	50 - 120	9	30		
p-Cresol	106	101	42 - 120	5	39		
Naphthalene	88	85	37 - 120	3	30		
Nitrobenzene	95	100	46 - 120	5	30		
2-Nitrophenol	85	94	47 - 120	10	30		
4-Nitrophenol	103	106	53 - 120	4	42		
N-Nitrosodimethylamine	103	89	37 - 120	15	30		
N-Nitrosodiphenylamine	106	95	46 - 203	11	50		
N-Nitrosodi-n-propylamine	101	96	50 - 120	5	30		
Pentachlorophenol	107	95	46 - 120	13	30		
Phenanthrene	104	102	54 - 120	2	30		
Phenol	103	98	37 - 112	5	30		
Pyrene	106	115	55 - 115	8	30		
1,2,4-Trichlorobenzene	70	76	44 - 120	9	35		
2,4,6-Trichlorophenol	97	99	51 - 120	2	30		
2-Methylphenol	102	94	38 - 120	8	35		
Benzo[g,h,i]perylene	112	95	48 - 120	16	64		
2,2'-Oxybis(1-chloropropane)	100	95	37 - 120	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	94	95	36 - 120
2-Fluorophenol	97	84	30 - 120
2,4,6-Tribromophenol	100	110	50 - 120
Nitrobenzene-d5	93	98	45 - 120
Phenol-d5	102	98	36 - 120
Terphenyl-d14	110	117	52 - 120

**Quality Control Results**

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49365****Method: 625  
Preparation: 625**

LCS Lab Sample ID: LCS 280-49365/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/20/2011 1546  
Date Prepared: 01/17/2011 1831

LCSD Lab Sample ID: LCSD 280-49365/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/20/2011 1605  
Date Prepared: 01/17/2011 1831

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acenaphthene	0.0800	0.0800	0.0767	0.0787
Acenaphthylene	0.0800	0.0800	0.0780	0.0815
Anthracene	0.0800	0.0800	0.0851	0.0804
Benzidine	0.200	0.200	0.194	0.219
Benzo[a]anthracene	0.0800	0.0800	0.0818	0.0861
Benzo[b]fluoranthene	0.0800	0.0800	0.0792	0.0855
Benzo[k]fluoranthene	0.0800	0.0800	0.0680	0.0748
Benzo[a]pyrene	0.0800	0.0800	0.0668	0.0712
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0691	0.0759
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0729	0.0703
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0813	0.0780
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0922	0.0805
Butyl benzyl phthalate	0.0800	0.0800	0.0832	0.0892
4-Chloro-3-methylphenol	0.0800	0.0800	0.0842	0.0745
2-Chloronaphthalene	0.0800	0.0800	0.0749	0.0772
2-Chlorophenol	0.0800	0.0800	0.0815	0.0761
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0784	0.0800
Chrysene	0.0800	0.0800	0.0824	0.0840
Dibenz(a,h)anthracene	0.0800	0.0800	0.0791	0.0681
Di-n-butyl phthalate	0.0800	0.0800	0.0872	0.0791
1,2-Dichlorobenzene	0.0800	0.0800	0.0599	0.0572
1,3-Dichlorobenzene	0.0800	0.0800	0.0567	0.0546
1,4-Dichlorobenzene	0.0800	0.0800	0.0588	0.0562
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0494	J 0.0508
2,4-Dichlorophenol	0.0800	0.0800	0.0705	0.0749
Diethyl phthalate	0.0800	0.0800	0.0818	0.0822
2,4-Dimethylphenol	0.0800	0.0800	0.0614	0.0657
Dimethyl phthalate	0.0800	0.0800	0.0836	0.0848
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0811	0.0749
2,4-Dinitrophenol	0.0800	0.0800	0.0711	0.0744
2,4-Dinitrotoluene	0.0800	0.0800	0.0839	0.0843
2,6-Dinitrotoluene	0.0800	0.0800	0.0762	0.0811
Di-n-octyl phthalate	0.0800	0.0800	0.0843	0.0888
Fluoranthene	0.0800	0.0800	0.0905	0.0900
Fluorene	0.0800	0.0800	0.0799	0.0824
Hexachlorobenzene	0.0800	0.0800	0.0837	0.0745
Hexachlorobutadiene	0.0800	0.0800	0.0594	0.0573
Hexachlorocyclopentadiene	0.0800	0.0800	0.0399	J 0.0420 J
Hexachloroethane	0.0800	0.0800	0.0531	0.0515
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0974	* 0.0821
Isophorone	0.0800	0.0800	0.0727	0.0794

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49365**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID: LCS 280-49365/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/20/2011 1546  
Date Prepared: 01/17/2011 1831

LCSD Lab Sample ID: LCSD 280-49365/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/20/2011 1605  
Date Prepared: 01/17/2011 1831

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
p-Cresol	0.160	0.160	0.169	0.161
Naphthalene	0.0800	0.0800	0.0701	0.0680
Nitrobenzene	0.0800	0.0800	0.0760	0.0797
2-Nitrophenol	0.0800	0.0800	0.0683	0.0751
4-Nitrophenol	0.0800	0.0800	0.0821	0.0852
N-Nitrosodimethylamine	0.0800	0.0800	0.0821	0.0710
N-Nitrosodiphenylamine	0.0683	0.0683	0.0724	0.0651
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0809	0.0770
Pentachlorophenol	0.0800	0.0800	0.0860	0.0758
Phenanthrene	0.0800	0.0800	0.0830	0.0816
Phenol	0.0800	0.0800	0.0820	0.0783
Pyrene	0.0800	0.0800	0.0850	0.0918
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0556	0.0609
2,4,6-Trichlorophenol	0.0800	0.0800	0.0778	0.0792
2-Methylphenol	0.0800	0.0800	0.0816	0.0755
Benzo[g,h,i]perylene	0.0800	0.0800	0.0894	0.0759
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0799	0.0762

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49321

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

Lab Sample ID: MB 280-49321/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2010  
Date Prepared: 01/17/2011 1427

Analysis Batch: 280-49542  
Prep Batch: 280-49321  
Units: mg/L

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010
Potassium	ND		0.24	3.0
Calcium	ND		0.034	0.20
Magnesium	ND		0.011	0.20
Sodium	0.221	J ^	0.092	5.0

### Lab Control Sample - Batch: 280-49321

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

Lab Sample ID: LCS 280-49321/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2012  
Date Prepared: 01/17/2011 1427

Analysis Batch: 280-49542  
Prep Batch: 280-49321  
Units: mg/L

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.07	107	88 - 110	
Cadmium	0.100	0.0980	98	88 - 111	
Iron	1.00	0.994	99	89 - 115	
Lead	0.500	0.524	105	89 - 110	
Selenium	2.00	2.14	107	85 - 112	
Zinc	0.500	0.470	94	85 - 111	
Silver	0.0500	0.0470	94	85 - 115	
Potassium	50.0	50.1	100	89 - 114	
Calcium	50.0	47.9	96	90 - 111	
Magnesium	50.0	47.7	95	90 - 113	
Sodium	50.0	53.4	107	90 - 115	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49321****Method: 200.7 Rev 4.4****Preparation: 200.7****Total Recoverable**

MS Lab Sample ID: 280-11648-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2032  
Date Prepared: 01/17/2011 1427

Analysis Batch: 280-49542  
Prep Batch: 280-49321

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-11648-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2035  
Date Prepared: 01/17/2011 1427

Analysis Batch: 280-49542  
Prep Batch: 280-49321

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	114	114	88 - 110	0	20	F	F
Cadmium	101	101	88 - 111	0	20		
Iron	221	160	89 - 115	4	20	4	4
Lead	95	95	89 - 110	1	20		
Selenium	111	111	85 - 112	1	20		
Zinc	93	92	85 - 111	1	20		
Silver	103	102	85 - 115	1	20		
Potassium	116	113	89 - 114	1	20	4	4
Calcium	95	91	90 - 111	1	20		
Magnesium	86	82	90 - 113	0	20	4	4
Sodium	222	132	90 - 115	1	20	4	4

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49321**

MS Lab Sample ID: 280-11644-C-7-B MS      Analysis Batch: 280-49542  
Client Matrix: Water      Prep Batch: 280-49321  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2349  
Date Prepared: 01/17/2011 1427

**Method: 200.7 Rev 4.4****Preparation: 200.7****Total Recoverable**

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-11644-C-7-C MSD      Analysis Batch: 280-49542  
Client Matrix: Water      Prep Batch: 280-49321  
Dilution: 1.0  
Date Analyzed: 01/18/2011 2351  
Date Prepared: 01/17/2011 1427

Instrument ID: MT\_026  
Lab File ID: 26a011811.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	113	114	88 - 110	0	20	F	F
Cadmium	99	100	88 - 111	0	20		
Iron	105	107	89 - 115	1	20		
Lead	108	109	89 - 110	0	20		
Selenium	112	113	85 - 112	1	20		F
Zinc	95	95	85 - 111	0	20		
Silver	97	98	85 - 115	1	20		
Potassium	106	106	89 - 114	0	20		
Calcium	97	97	90 - 111	0	20		
Magnesium	96	96	90 - 113	0	20		
Sodium	111	109	90 - 115	1	20		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### **Matrix Spike/**

### **Matrix Spike Duplicate Recovery Report - Batch: 280-49321**

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

MS Lab Sample ID: 280-11648-5  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 01/18/2011 2032  
 Date Prepared: 01/17/2011 1427

Units: mg/L

MSD Lab Sample ID: 280-11648-5  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 01/18/2011 2035  
 Date Prepared: 01/17/2011 1427

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	ND	1.00	1.00	1.14	F
Cadmium	ND	0.100	0.100	0.101	0.101
Iron	14	1.00	1.00	16.2	4
Lead	0.0061	J	0.500	0.483	0.480
Selenium	ND	2.00	2.00	2.23	2.21
Zinc	0.037		0.500	0.502	0.495
Silver	ND	0.0500	0.0500	0.0514	0.0510
Potassium	200	50.0	50.0	258	4
Calcium	190	50.0	50.0	243	240
Magnesium	510	50.0	50.0	554	4
Sodium	5000	50.0	50.0	5100	4
				5050	4

### **Matrix Spike/**

### **Matrix Spike Duplicate Recovery Report - Batch: 280-49321**

**Method: 200.7 Rev 4.4**

**Preparation: 200.7**

**Total Recoverable**

MS Lab Sample ID: 280-11644-C-7-B MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 01/18/2011 2349  
 Date Prepared: 01/17/2011 1427

Units: mg/L

MSD Lab Sample ID: 280-11644-C-7-C MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 01/18/2011 2351  
 Date Prepared: 01/17/2011 1427

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	ND	1.00	1.00	1.13	F
Cadmium	ND	0.100	0.100	0.0993	0.0997
Iron	0.31	1.00	1.00	1.35	1.37
Lead	ND	0.500	0.500	0.542	0.543
Selenium	ND	2.00	2.00	2.24	2.27
Zinc	ND	0.500	0.500	0.476	0.475
Silver	ND	0.0500	0.0500	0.0486	0.0492
Potassium	1.4	J	50.0	54.2	54.4
Calcium	61		50.0	109	109
Magnesium	13		50.0	61.1	61.1
Sodium	30		50.0	85.0	84.0

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49281

**Method: 245.1**

**Preparation: 245.1**

Lab Sample ID:	MB 280-49281/1-A	Analysis Batch:	280-49379	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1559			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

### Lab Control Sample - Batch: 280-49281

**Method: 245.1**

**Preparation: 245.1**

Lab Sample ID:	LCS 280-49281/2-A	Analysis Batch:	280-49379	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1601			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00526	105	90 - 110	

### Matrix Spike/

### Matrix Spike Duplicate Recovery Report - Batch: 280-49281

**Method: 245.1**

**Preparation: 245.1**

MS Lab Sample ID:	280-11648-3	Analysis Batch:	280-49379	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1615			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

MSD Lab Sample ID:	280-11648-3	Analysis Batch:	280-49379	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-49281	Lab File ID:	110117AB.txt
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	01/17/2011 1617			Final Weight/Volume:	10 mL
Date Prepared:	01/17/2011 1155				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	108	106	80 - 120	1	10		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49281**

**Method: 245.1  
Preparation: 245.1**

MS Lab Sample ID: 280-11648-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1615  
Date Prepared: 01/17/2011 1155

Units: mg/L

MSD Lab Sample ID: 280-11648-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1617  
Date Prepared: 01/17/2011 1155

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.00500	0.00500	0.00538	0.00530

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### **Method Blank - Batch: 280-49286**

**Method: 1664A**

**Preparation: 1664A**

Lab Sample ID: MB 280-49286/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1223  
Date Prepared: 01/17/2011 1146

Analysis Batch: 280-49297  
Prep Batch: 280-49286  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 1000 mL

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

### **Lab Control Sample/**

### **Lab Control Sample Duplicate Recovery Report - Batch: 280-49286**

**Method: 1664A**

**Preparation: 1664A**

LCS Lab Sample ID: LCS 280-49286/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1223  
Date Prepared: 01/17/2011 1146

Analysis Batch: 280-49297  
Prep Batch: 280-49286  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 1000 mL

LCSD Lab Sample ID: LCSD 280-49286/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1223  
Date Prepared: 01/17/2011 1146

Analysis Batch: 280-49297  
Prep Batch: 280-49286  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 1000 mL

Analyte	% Rec.						LCS Qual	LCSD Qual
	LCS	LCSD	Limit	RPD	RPD Limit			
HEM	85	86	81 - 107	1	22			

## **Quality Control Results**

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49286**

**Method: 1664A  
Preparation: 1664A**

LCS Lab Sample ID: LCS 280-49286/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1223  
Date Prepared: 01/17/2011 1146

LCSD Lab Sample ID: LCSD 280-49286/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1223  
Date Prepared: 01/17/2011 1146

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	34.1	34.3

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49632

**Method: 300.0A**

**Preparation: N/A**

Lab Sample ID: MB 280-49632/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1231  
Date Prepared: N/A

Analysis Batch: 280-49632  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_IC6  
Lab File ID: 115.TXT  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Bromide	ND		0.11	0.20
Chloride	ND		0.25	0.50
Sulfate	0.245	J	0.23	5.0

### Method Reporting Limit Check - Batch: 280-49632

**Method: 300.0A**

**Preparation: N/A**

Lab Sample ID: MRL 280-49632/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1139  
Date Prepared: N/A

Analysis Batch: 280-49632  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_IC6  
Lab File ID: 112.TXT  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	0.200	0.196	98	50 - 150	J
Chloride	1.00	0.976	98	50 - 150	J
Sulfate	1.00	1.03	103	50 - 150	J

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### **Lab Control Sample/**

#### **Lab Control Sample Duplicate Recovery Report - Batch: 280-49632**

**Method: 300.0A**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-49632/4	Analysis Batch:	280-49632	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/17/2011 1156			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

LCSD Lab Sample ID:	LCSD 280-49632/5	Analysis Batch:	280-49632	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/17/2011 1214			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Bromide	97	98	90 - 110	0	10	
Chloride	100	100	90 - 110	0	10	
Sulfate	102	102	90 - 110	0	10	

### **Laboratory Control/**

#### **Laboratory Duplicate Data Report - Batch: 280-49632**

**Method: 300.0A**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-49632/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-49632/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/17/2011 1156			Date Analyzed:	01/17/2011 1214
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Bromide	5.00	5.00	4.87	4.89
Chloride	25.0	25.0	24.9	24.9
Sulfate	25.0	25.0	25.6	25.4

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49632****Method: 300.0A****Preparation: N/A**

MS Lab Sample ID:	280-11561-A-5 MS	Analysis Batch:	280-49632	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	124.TXT
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/17/2011 1652			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	280-11561-A-5 MSD	Analysis Batch:	280-49632	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	125.TXT
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/17/2011 1709			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Bromide	103	103	80 - 120	0	20		
Chloride	104	105	80 - 120	1	20		
Sulfate	104	104	80 - 120	0	20		

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49632****Method: 300.0A****Preparation: N/A**

MS Lab Sample ID:	280-11561-A-5 MS	Units: mg/L	MSD Lab Sample ID:	280-11561-A-5 MSD
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	01/17/2011 1652		Date Analyzed:	01/17/2011 1709
Date Prepared:	N/A		Date Prepared:	N/A

Analyte	Sample	MS Spike	MSD Spike	MS	MSD
	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Bromide	ND	5.00	5.00	5.14	5.17
Chloride	3.1	25.0	25.0	29.1	29.4
Sulfate	5.1	25.0	25.0	31.0	31.2

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

Duplicate - Batch: 280-49632

Method: 300.0A

Preparation: N/A

Lab Sample ID: 280-11561-A-5 DU  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1634  
Date Prepared: N/A

Analysis Batch: 280-49632  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_IC6  
Lab File ID: 123.TXT  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Bromide	ND	ND	NC	15	
Chloride	3.1	3.10	1	15	
Sulfate	5.1	5.08	0.4	15	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49479

Method: 350.1

Preparation: N/A

Lab Sample ID: MB 280-49479/68  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1443  
Date Prepared: N/A

Analysis Batch: 280-49479  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-49479

Method: 350.1

Preparation: N/A

LCS Lab Sample ID: LCS 280-49479/69  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1444  
Date Prepared: N/A

Analysis Batch: 280-49479  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49479/70  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1446  
Date Prepared: N/A

Analysis Batch: 280-49479  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia	100	101	90 - 110	1	10		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49479**

**Method: 350.1  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-49479/69  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1444  
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-49479/70  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1446  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	5.00	5.00	4.99	5.03

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49479**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-11648-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1449  
Date Prepared: N/A

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-11648-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1450  
Date Prepared: N/A

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia	103	104	90 - 110	0	20		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49479****Method: 350.1****Preparation: N/A**

MS Lab Sample ID: 280-11648-3                          Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1449  
Date Prepared: N/A

MSD Lab Sample ID: 280-11648-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1450  
Date Prepared: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	0.053 J	4.00	4.00	4.19	4.21

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Method Blank - Batch: 280-49480****Method: 353.2****Preparation: N/A**

Lab Sample ID: MB 280-49480/24  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1337  
Date Prepared: N/A

Analysis Batch: 280-49480  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

**Method Reporting Limit Check - Batch: 280-49480****Method: 353.2****Preparation: N/A**

Lab Sample ID: MRL 280-49480/17  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1326  
Date Prepared: N/A

Analysis Batch: 280-49480  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0947	95	50 - 150	J

**Lab Control Sample/****Lab Control Sample Duplicate Recovery Report - Batch: 280-49480****Method: 353.2****Preparation: N/A**

LCS Lab Sample ID: LCS 280-49480/25  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1338  
Date Prepared: N/A

Analysis Batch: 280-49480  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49480/26  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1340  
Date Prepared: N/A

Analysis Batch: 280-49480  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD				
Nitrate Nitrite as N	100	100	90 - 110	0	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49480**

**Method: 353.2**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-49480/25  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1338  
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-49480/26  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1340  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	4.98	4.98

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49480**

**Method: 353.2**

**Preparation: N/A**

MS Lab Sample ID: 280-11561-E-7 MS  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1419  
Date Prepared: N/A

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-11561-E-7 MSD  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1420  
Date Prepared: N/A

Instrument ID: WC\_Alp 2  
Lab File ID: C:\FLOW\_4\0118NXN.RST  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrate Nitrite as N	99	98	72 - 113	0	17		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49480**

**Method: 353.2  
Preparation: N/A**

MS Lab Sample ID: 280-11561-E-7 MS      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1419  
Date Prepared: N/A

MSD Lab Sample ID: 280-11561-E-7 MSD  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1420  
Date Prepared: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	1.1	4.00	4.00	5.07	5.06

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49680

Method: 365.1

Preparation: 365.2/365.3/365

Lab Sample ID: MB 280-49680/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analysis Batch: 280-49895  
Prep Batch: 280-49680  
Units: mg/L

Instrument ID: WC\_Konelab  
Lab File ID: 012111Tplos2.xls  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.0115	J	0.0050	0.050

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-49680

Method: 365.1

Preparation: 365.2/365.3/365

LCS Lab Sample ID: LCS 280-49680/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analysis Batch: 280-49895  
Prep Batch: 280-49680  
Units: mg/L

Instrument ID: WC\_Konelab  
Lab File ID: 012111Tplos2.xls  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 280-49680/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analysis Batch: 280-49895  
Prep Batch: 280-49680  
Units: mg/L

Instrument ID: WC\_Konelab  
Lab File ID: 012111Tplos2.xls  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Phosphorus, Total	97	97	90 - 110	1	10		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49680**

**Method: 365.1  
Preparation: 365.2/365.3/365**

LCS Lab Sample ID: LCS 280-49680/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Units: mg/L

LCSD Lab Sample ID: LCSD 280-49680/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.483	0.487

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49680**

**Method: 365.1  
Preparation: 365.2/365.3/365**

MS Lab Sample ID: 280-11648-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analysis Batch: 280-49895  
Prep Batch: 280-49680

Instrument ID: WC\_Konelab  
Lab File ID: 012111TpHos2.xls  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-11648-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analysis Batch: 280-49895  
Prep Batch: 280-49680

Instrument ID: WC\_Konelab  
Lab File ID: 012111TpHos2.xls  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Phosphorus, Total	87	75	71 - 128	8	22		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-49680****Method: 365.1****Preparation: 365.2/365.3/365**

MS Lab Sample ID: 280-11648-5                          Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

MSD Lab Sample ID: 280-11648-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 0856  
Date Prepared: 01/20/2011 0938

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	0.33	0.500	0.500	0.767	0.706

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49489

**Method: 410.4**

**Preparation: N/A**

Lab Sample ID: MB 280-49489/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Analysis Batch: 280-49489  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 2 mL

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-49489

**Method: 410.4**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-49489/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Analysis Batch: 280-49489  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49489/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Analysis Batch: 280-49489  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chemical Oxygen Demand	94	100	90 - 110	7	11		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-49489

**Method: 410.4**  
**Preparation: N/A**

LCS Lab Sample ID: LCS 280-49489/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-49489/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	93.7	100

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-49489

**Method: 410.4**  
**Preparation: N/A**

MS Lab Sample ID: 280-11648-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-11648-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chemical Oxygen Demand	101	95	90 - 110	4	11		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49489**

**Method: 410.4  
Preparation: N/A**

MS Lab Sample ID: 280-11648-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Units: mg/L

MSD Lab Sample ID: 280-11648-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1729  
Date Prepared: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	29	50.0	50.0	79.1	76.0

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49821

**Method: 410.4**

**Preparation: N/A**

Lab Sample ID: MB 280-49821/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Analysis Batch: 280-49821  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 2 mL

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 280-49821

**Method: 410.4**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-49821/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Analysis Batch: 280-49821  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49821/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Analysis Batch: 280-49821  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.						LCS Qual	LCSD Qual
	LCS	LCSD	Limit	RPD	RPD Limit			
Chemical Oxygen Demand	107	110	90 - 110	2	11			

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49821**

**Method: 410.4  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-49821/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-49821/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	107	110

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49821**

**Method: 410.4  
Preparation: N/A**

MS Lab Sample ID: 280-11648-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 280-11648-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Instrument ID: WC\_HACH SPEC  
Lab File ID: N/A  
Initial Weight/Volume: 2 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chemical Oxygen Demand	94	100	90 - 110	3	11		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-49821**

**Method: 410.4  
Preparation: N/A**

MS Lab Sample ID: 280-11648-1      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

MSD Lab Sample ID: 280-11648-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/19/2011 1737  
Date Prepared: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	45	50.0	50.0	91.6	94.4

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Method Blank - Batch: 280-49444****Method: SM 2320B****Preparation: N/A**

Lab Sample ID: MB 280-49444/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1852  
Date Prepared: N/A

Analysis Batch: 280-49444  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 011711.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Total Alkalinity	ND		1.1	5.0
Bicarbonate Alkalinity	ND		1.1	5.0
Carbonate Alkalinity	ND		1.1	5.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-49444****Method: SM 2320B****Preparation: N/A**

LCS Lab Sample ID: LCS 280-49444/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1835  
Date Prepared: N/A

Analysis Batch: 280-49444  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 011711.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-49444/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1845  
Date Prepared: N/A

Analysis Batch: 280-49444  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 011711.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Alkalinity	98	100	90 - 110	2	10		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49444**

**Method: SM 2320B  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-49444/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1835  
Date Prepared: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-49444/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1845  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Alkalinity	200	200	195	199

**Duplicate - Batch: 280-49444**

**Method: SM 2320B  
Preparation: N/A**

Lab Sample ID: 280-11644-A-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/17/2011 1919  
Date Prepared: N/A

Analysis Batch: 280-49444  
Prep Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 011711.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Alkalinity	1100	1140	0.2	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Method Blank - Batch: 280-49449****Method: SM 2540D****Preparation: N/A**

Lab Sample ID: MB 280-49449/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Analysis Batch: 280-49449  
Prep Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 250 mL  
Final Weight/Volume: 250 mL

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-49449****Method: SM 2540D**  
**Preparation: N/A**

LCS Lab Sample ID: LCS 280-49449/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Analysis Batch: 280-49449  
Prep Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 250 mL

LCSD Lab Sample ID: LCSD 280-49449/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Analysis Batch: 280-49449  
Prep Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 250 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	101	102	86 - 114	1	20		

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-49449**

**Method: SM 2540D  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-49449/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-49449/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	101	102

**Duplicate - Batch: 280-49449**

**Method: SM 2540D  
Preparation: N/A**

Lab Sample ID: 280-11616-C-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/18/2011 1349  
Date Prepared: N/A

Analysis Batch: 280-49449  
Prep Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume: 25 mL  
Final Weight/Volume: 250 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	280	272	1	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Method Blank - Batch: 280-49935

### Method: Total Nitrogen

Preparation: N/A

Lab Sample ID: MB 280-49935/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 01/21/2011 1207  
Date Prepared: N/A

Analysis Batch: 280-49935  
Prep Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10







## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Laboratory Chronicle

Lab ID: 280-11648-4	Client ID: OCEAN EAST
	Sample Date/Time: 01/13/2011 18:00
	Received Date/Time: 01/17/2011 08:30

Method	Bottle ID	Analysis		Date Prepared / Analyzed		Dil	Lab	Analyst
		Run	Batch	Prep Batch	Date			
P:625	280-11648-B-4-A	280-49865	280-49365	01/17/2011 18:31	1	TAL DEN	TBL	
A:625	280-11648-B-4-A	280-49865	280-49365	01/21/2011 01:47	1	TAL DEN	MGH	
P:200.7	280-11648-F-4-B	280-49542	280-49321	01/17/2011 14:27	1	TAL DEN	KMN	
A:200.7 Rev 4.4	280-11648-F-4-B	280-49542	280-49321	01/18/2011 20:22	1	TAL DEN	HEB	
P:200.7	280-11648-F-4-B ^100	280-49660	280-49321	01/17/2011 14:27	100	TAL DEN	KMN	
A:200.7 Rev 4.4	280-11648-F-4-B ^100	280-49660	280-49321	01/19/2011 19:20	100	TAL DEN	HEB	
P:245.1	280-11648-F-4-A	280-49379	280-49281	01/17/2011 11:55	1	TAL DEN	KS	
A:245.1	280-11648-F-4-A	280-49379	280-49281	01/17/2011 16:20	1	TAL DEN	KS	
P:1664A	280-11648-C-4-A	280-49297	280-49286	01/17/2011 11:46	1	TAL DEN	PAG	
A:1664A	280-11648-C-4-A	280-49297	280-49286	01/17/2011 12:23	1	TAL DEN	PAG	
A:300.0A	280-11648-G-4	280-49632		01/17/2011 20:02	20	TAL DEN	TLP	
A:300.0A	280-11648-G-4	280-49632		01/18/2011 12:14	100	TAL DEN	TLP	
A:300.0A	280-11648-G-4	280-49632		01/18/2011 12:31	500	TAL DEN	TLP	
A:350.1	280-11648-E-4	280-49479		01/18/2011 14:55	1	TAL DEN	LES	
A:353.2	280-11648-E-4	280-49480		01/18/2011 14:29	1	TAL DEN	LES	
P:365.2/365.3/365.3/365	280-11648-E-4-B	280-49895	280-49680	01/20/2011 09:38	1	TAL DEN	SJS	
A:365.1	280-11648-E-4-B	280-49895	280-49680	01/21/2011 08:56	1	TAL DEN	SJS	
A:410.4	280-11648-A-4	280-49821		01/19/2011 17:37	5	TAL DEN	MRD	
A:SM 2320B	280-11648-D-4	280-49444		01/17/2011 21:06	1	TAL DEN	MRD	
A:SM 2540D	280-11648-D-4	280-49449		01/18/2011 13:49	1	TAL DEN	PAG	
A:Total Nitrogen	280-11648-A-4	280-49935		01/21/2011 12:07	1	TAL DEN	RS	
A:Field Sampling	280-11648-A-4	280-49270		01/13/2011 18:00	1	TAL DEN	FS	







## Quality Control Results

Client: Waste Management

Job Number: 280-11648-1

### Laboratory Chronicle

Lab ID:	MRL	Client ID:	N/A		Sample Date/Time:	N/A	Received Date/Time:	N/A
Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0A	MRL 280-49632/3		280-49632		01/17/2011 11:39	1	TAL DEN	TLP
A:353.2	MRL 280-49480/17		280-49480		01/18/2011 13:26	1	TAL DEN	LES
Lab ID:	MS	Client ID:	N/A		Sample Date/Time:	01/14/2011 12:52	Received Date/Time:	01/15/2011 10:00
Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-11644-C-7-B MS		280-49542	280-49321	01/17/2011 14:27	1	TAL DEN	KMN
A:200.7 Rev 4.4	280-11644-C-7-B MS		280-49542	280-49321	01/18/2011 23:49	1	TAL DEN	HEB
A:300.0A	280-11561-A-5 MS		280-49632		01/17/2011 16:52	1	TAL DEN	TLP
A:353.2	280-11561-E-7 MS		280-49480		01/18/2011 14:19	1	TAL DEN	LES
Lab ID:	MSD	Client ID:	N/A		Sample Date/Time:	01/14/2011 12:52	Received Date/Time:	01/15/2011 10:00
Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-11644-C-7-C MSD		280-49542	280-49321	01/17/2011 14:27	1	TAL DEN	KMN
A:200.7 Rev 4.4	280-11644-C-7-C MSD		280-49542	280-49321	01/18/2011 23:51	1	TAL DEN	HEB
A:300.0A	280-11561-A-5 MSD		280-49632		01/17/2011 17:09	1	TAL DEN	TLP
A:353.2	280-11561-E-7 MSD		280-49480		01/18/2011 14:20	1	TAL DEN	LES
Lab ID:	DU	Client ID:	N/A		Sample Date/Time:	01/12/2011 10:05	Received Date/Time:	01/12/2011 17:26
Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0A	280-11561-A-5 DU		280-49632		01/17/2011 16:34	1	TAL DEN	TLP
A:SM 2320B	280-11644-A-1 DU		280-49444		01/17/2011 19:19	1	TAL DEN	MRD
A:SM 2540D	280-11616-C-1 DU		280-49449		01/18/2011 13:49	1	TAL DEN	PAG

#### Lab References:

TAL DEN = TestAmerica Denver

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Honolulu

99-193 Aiea Heights Drive, Suite 121

Aiea, HI 96701

Tel: 808-486-5227

TestAmerica Job ID: HUA0073

TestAmerica Sample Delivery Group: HUA0073

Client Project/Site: 60147675.02

Client Project Description: AECOM, W GSL STORMWATER

For:

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Attn: Betsy Sarah

Authorized for release by:

1/21/2011 12:58 PM

Marvin D. Heskett III

Laboratory Director

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Angelique Showman

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## Qualifier Definition/Glossary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073

### Glossary

Glossary	Glossary Description
----------	----------------------

 Listed under the "D" column to designate that the result is reported on a dry weight basis.

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## Sample Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HUA0073-01	CULVERT	Water - NonPotable	01/13/11 19:15	01/14/11 00:00
HUA0073-02	UP CANYON	Water - NonPotable	01/13/11 17:50	01/14/11 00:00
HUA0073-03	OCEAN WEST	Water - NonPotable	01/13/11 17:45	01/14/11 00:00
HUA0073-04	OCEAN EAST	Water - NonPotable	01/13/11 15:00	01/14/11 00:00
HUA0073-05	OCEAN OUTLET	Water - NonPotable	01/13/11 18:15	01/14/11 00:00



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## Detection Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073

### Client Sample ID: CULVERT

Lab Sample ID: HUA0073-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	8.91		2.00		mg/L	1		EPA 405.1	total

### Client Sample ID: UP CANYON

Lab Sample ID: HUA0073-02

No Detections.

### Client Sample ID: OCEAN WEST

Lab Sample ID: HUA0073-03

No Detections.

### Client Sample ID: OCEAN EAST

Lab Sample ID: HUA0073-04

No Detections.

### Client Sample ID: OCEAN OUTLET

Lab Sample ID: HUA0073-05

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	3.48		2.00		mg/L	1		EPA 405.1	total



## Analytical Data

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073



**Client Sample ID: OCEAN OUTLET**

Date Collected: 01/13/11 18:15

Date Received: 01/14/11 00:00

**Lab Sample ID: HUA0073-05**

Matrix: Water - NonPotable



Method: EPA 7196 - Hexavalent Chromium by EPA Method 7196A

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Hexavalent	ND		10.0		ug/L		01/14/11 14:40	01/14/11 14:42	1

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## Quality Control Data

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073

### Method: EPA 405.1 - General Chemistry Parameters

Lab Sample ID: 11A0067-BLK1 Matrix: Water - NonPotable Analysis Batch: 11A0067						Client Sample ID: 11A0067-BLK1 Prep Type: total Prep Batch: 11A0067_P					
Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
BOD - 5 Day	ND		2.00		mg/L		01/14/11 10:25	01/19/11 11:08		1	
Lab Sample ID: 11A0067-BS1 Matrix: Water - NonPotable Analysis Batch: 11A0067						Client Sample ID: 11A0067-BS1 Prep Type: total Prep Batch: 11A0067_P					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.					
BOD - 5 Day	198	179		mg/L		91	85 - 115				
Lab Sample ID: 11A0067-DUP1 Matrix: Water - NonPotable Analysis Batch: 11A0067						Client Sample ID: HUA0066-01 Prep Type: total Prep Batch: 11A0067_P					
Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD				
BOD - 5 Day	2.97		2.96		mg/L		0.3	20			

### Method: EPA 7196 - Hexavalent Chromium by EPA Method 7196A

Lab Sample ID: 11A0072-BLK1 Matrix: Water - NonPotable Analysis Batch: 11A0072						Client Sample ID: 11A0072-BLK1 Prep Type: total Prep Batch: 11A0072_P					
Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chromium, Hexavalent	ND		10.0		ug/L		01/14/11 14:40	01/14/11 14:42		1	
Lab Sample ID: 11A0072-BS1 Matrix: Water - NonPotable Analysis Batch: 11A0072						Client Sample ID: 11A0072-BS1 Prep Type: total Prep Batch: 11A0072_P					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.					
Chromium, Hexavalent	500	501		ug/L		100	80 - 120				
Lab Sample ID: 11A0072-MS1 Matrix: Water - NonPotable Analysis Batch: 11A0072						Client Sample ID: OCEAN WEST Prep Type: total Prep Batch: 11A0072_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec.			
Chromium, Hexavalent	ND		500	476		ug/L		95	75 - 125		
Lab Sample ID: 11A0072-MSD1 Matrix: Water - NonPotable Analysis Batch: 11A0072						Client Sample ID: OCEAN WEST Prep Type: total Prep Batch: 11A0072_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	% Rec.			
Chromium, Hexavalent	ND		500	481		ug/L		96	75 - 125	1	20



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## QC Association Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073



### **WetChem**

#### Analysis Batch: 11A0067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A0067-BLK1	11A0067-BLK1	total	Water - NonPotable	EPA 405.1	11A0067_P
11A0067-BS1	11A0067-BS1	total	Water - NonPotable	EPA 405.1	11A0067_P
11A0067-DUP1	HUA0066-01	total	Water - NonPotable	EPA 405.1	11A0067_P
HUA0073-01	CULVERT	total	Water - NonPotable	EPA 405.1	11A0067_P
HUA0073-02	UP CANYON	total	Water - NonPotable	EPA 405.1	11A0067_P
HUA0073-03	OCEAN WEST	total	Water - NonPotable	EPA 405.1	11A0067_P
HUA0073-04	OCEAN EAST	total	Water - NonPotable	EPA 405.1	11A0067_P
HUA0073-05	OCEAN OUTLET	total	Water - NonPotable	EPA 405.1	11A0067_P

#### Prep Batch: 11A0067\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A0067-BLK1	11A0067-BLK1	total	Water - NonPotable	Default Prep	
11A0067-BS1	11A0067-BS1	total	Water - NonPotable	GenChem	
11A0067-DUP1	HUA0066-01	total	Water - NonPotable	Default Prep	
HUA0073-01	CULVERT	total	Water - NonPotable	GenChem	
HUA0073-02	UP CANYON	total	Water - NonPotable	Default Prep	
HUA0073-03	OCEAN WEST	total	Water - NonPotable	GenChem	
HUA0073-04	OCEAN EAST	total	Water - NonPotable	Default Prep	
HUA0073-05	OCEAN OUTLET	total	Water - NonPotable	GenChem	

#### Analysis Batch: 11A0072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A0072-BLK1	11A0072-BLK1	total	Water - NonPotable	EPA 7196	11A0072_P
11A0072-BS1	11A0072-BS1	total	Water - NonPotable	EPA 7196	11A0072_P
11A0072-MS1	OCEAN WEST	total	Water - NonPotable	EPA 7196	11A0072_P
11A0072-MSD1	OCEAN WEST	total	Water - NonPotable	EPA 7196	11A0072_P
HUA0073-01	CULVERT	total	Water - NonPotable	EPA 7196	11A0072_P
HUA0073-02	UP CANYON	total	Water - NonPotable	EPA 7196	11A0072_P
HUA0073-03	OCEAN WEST	total	Water - NonPotable	EPA 7196	11A0072_P
HUA0073-04	OCEAN EAST	total	Water - NonPotable	EPA 7196	11A0072_P
HUA0073-05	OCEAN OUTLET	total	Water - NonPotable	EPA 7196	11A0072_P

#### Prep Batch: 11A0072\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A0072-BLK1	11A0072-BLK1	total	Water - NonPotable	Default Prep	
11A0072-BS1	11A0072-BS1	total	Water - NonPotable	GenChem	
11A0072-MS1	OCEAN WEST	total	Water - NonPotable	Default Prep	

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## QC Association Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073



### WetChem (Continued)

#### Prep Batch: 11A0072\_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11A0072-MSD1	OCEAN WEST	total	Water - NonPotable	Default Prep GenChem	
HUA0073-01	CULVERT	total	Water - NonPotable	Default Prep GenChem	
HUA0073-02	UP CANYON	total	Water - NonPotable	Default Prep GenChem	
HUA0073-03	OCEAN WEST	total	Water - NonPotable	Default Prep GenChem	
HUA0073-04	OCEAN EAST	total	Water - NonPotable	Default Prep GenChem	
HUA0073-05	OCEAN OUTLET	total	Water - NonPotable	Default Prep GenChem	

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## Lab Chronicle

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073

**Client Sample ID: OCEAN OUTLET**

**Lab Sample ID: HUA0073-05**

Matrix: Water - NonPotable

Date Collected: 01/13/11 18:15  
Date Received: 01/14/11 00:00

Prep Type	Batch	Batch	Run	Dilution	Batch Number	Prepared		Lab
	Type	Method		Factor		Or Analyzed	Analyst	
total	Analysis	EPA 405.1		1	11A0067	01/19/11 11:08	JLM	TestAmerica Honolulu
total	Prep	Default Prep GenChem		1.00	11A0072_P	01/14/11 14:40	JLM	TestAmerica Honolulu
total	Analysis	EPA 7196		1	11A0072	01/14/11 14:42	JLM	TestAmerica Honolulu



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TestAmerica Honolulu

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01/21/2011

WMH 000576

## Certification Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073



Laboratory	Authority	Program	EPA Region	Certification ID	Expiration Date
TestAmerica Honolulu		USDA		HON-S-206	01/31/12
TestAmerica Honolulu	Florida	NELAC	4	E87907	06/30/11
TestAmerica Honolulu	Hawaii	State Program	9		06/28/11
TestAmerica Honolulu	L-A-B	DoD ELAP	0	L2250	04/23/13

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



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## Method Summary

Client: TestAmerica Denver  
Project/Site: 60147675.02

TestAmerica Job ID: HUA0073  
SDG: HUA0073

Method	Method Description	Protocol	Laboratory
EPA 405.1	General Chemistry Parameters		TAL HON
EPA 7196	Hexavalent Chromium by EPA Method 7196A		TAL HON

**Protocol References:**

=

**Laboratory References:**

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227



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## Chain of Custody Record

Sampler ID \_\_\_\_\_

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client **Waste Management / AT&T Tech Svcs.** Project Manager **Tobias K. Schler**  
Address **1001 Bishop St., Ste 1600** Telephone Number (Area Code)/Fax Number **808 - 5306**  
City **Honolulu** State **H1** Zip Code **96813**

Site Contact **Justin Loftig** Lab Contact **Betsy Serna**  
Carrier/Bill Number **Waste Management Inc. W65L/995** Carrier/Bill Number **Waste Management Inc. W65L/995**  
Contact/Purchase Order/Quote No. **#8002788 (Stormwater)**

Sample ID. No. and Description  
(Containers for each sample may be combined on one line)  
(Containers for each sample may be combined on one line)

Container	Date	Time	Matrix	Containers & Preservatives
Cylinder	1/13/11	1915	X	X X
Up canyon	1/13/11	1950	X	X X
Ocean West	1/13/11	1745	X	X X
Ocean East	1/13/11	1800	X	X X
Ocean outfit	1/13/11	1815	X	X X

Sample Disposal	Return To Client	Disposal By Lab	Archive For	Comments
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison A	
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days
<input checked="" type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days
1. Relinquished By <b>David Lin</b>	Date <b>1/13/11</b>	Time <b>2115</b>	1. Received By <b>Tables, Inc.</b>	Date <b>1/13/11</b>
2. Relinquished By <b>Tables, Inc.</b>	Date <b>1/14/11</b>	Time <b>0930</b>	2. Received By <b>Tables, Inc.</b>	Date <b>1/14/11</b>
3. Relinquished By <b>Tables, Inc.</b>	Date <b>1/14/11</b>	Time <b>0930</b>	3. Received By <b>Tables, Inc.</b>	Date <b>1/14/11</b>

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison A  Unknown  
Turn Around Time Required  
 24 Hours  48 Hours  7 Days  14 Days  21 Days

QC Requirements (Specify)  
**ASAP**

Comments **Labels accidentally have TSS on it - pls ignore. BOD + Cr VI only samples!**

DISTRIBUTION: **WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy**

**Reports to Denver**



Rush TAT Confirmation (Initial/Date) \_\_\_\_\_

HUA0073

**Sample Receipt Checklist**Client Name: Waste Management Date/ Time Received: 4/14/11 9:30Received By: meMatrices: AQCarrier: Client

Airbill#:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of Custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody Signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of Custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Type: <u>water</u>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Water - VOA Vials have Zero Headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials present: <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Checked: <input checked="" type="checkbox"/>
Encodes / MI-VOC / 5035 Vials Present?	pH Adjusted? Yes <input type="checkbox"/>	No <input type="checkbox"/>	Final pH: _____
Sample Filtration Needed?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Location: _____
Dry Weight Corrected Results?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Filtered in Field: <input type="checkbox"/>
DODQSM / QAPP Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Take Action: <input type="checkbox"/>
			Type: _____

Temperature Blank Present? Yes  No Sample Container Temperature: 3 °C**Comments/ Sampling Handling Notes:**

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**Chain of  
Custody Record**

TAL-4124-280 (0509)

Sampler ID 9288 Date 1/13/11  
 Temperature on Receipt 47.9 lot 107  
**TestAmerica**

Drinking Water? Yes  No  THE LEADER IN ENVIRONMENTAL TESTING

Color Black Total 11  
 WMH 000581

Client Address <u>Waste Management/Hecom Tech, Inc.</u>	Project Manager <u>Tobias Kochler</u>	Date <u>1/13/11</u>	Chain of Custody Number <u>134139</u>
City <u>Hanahan</u>	State <u>SC</u>	Zip Code <u>29681-3</u>	Telephone Number (Area Code)/Fax Number <u>803.356.5306</u>
Project Name and Location (State) <u>Waste Management W6SL</u>		Site Contact <u>Tristan Loftin</u>	Lab Contact <u>Betsy Sora</u>
Contract/Purchase Order/Quote No. <u>1955</u>		Carrier/Mailbill Number	

**2 8802788 (Stormwater)**

Matrix See Attached List  
 Containers & Preservatives for Analyses required

(Containers for each sample may be combined on one line)

Sample I.D. No. and Description	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc1	NaOH
Culvert	1/13/11	1915	X				X	X	X	X			
Upcanyon	1/13/11	1950	X										
Ocean west	1/13/11	1745	X										
Ocean East	1/13/11	1800	X										
Ocean outlet	1/13/11	1815	X										

Possible Hazard Identification

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Return To Client  Disposal By Lab  Archive For 2 Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

24 Hours  48 Hours  7 Days  14 Days  21 Days  Other ASAP

QC Requirements (Specify)

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1. Relinquished By <u>David Lin</u>	Date <u>1/13/11</u>	Time <u>2115</u>	1. Received By <u>Kochler</u>	Date <u>1/13/11</u>	Time <u>2115</u>
2. Relinquished By <u>Tobias Roehler</u>	Date <u>1/14/11</u>	Time <u>0830</u>	2. Received By <u>David Lin</u>	Date <u>1/14/11</u>	Time <u>0830</u>
3. Relinquished By <u>David Lin</u>	Date <u>1/14/11</u>	Time <u>0845</u>	3. Received By <u>Tobias Roehler</u>	Date <u>1/14/11</u>	Time <u>0845</u>

Comments

Containers for Preservatives. One lake  
 Coolers contain the reagent blank. See containers for preservatives. One lake  
 DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Ships with the Samples; PINK - Field Copy on each sample; mistakenly has BOD and  
 Sample ID 1/13/11 0830 in II - please ignore. Photo copy of coc code

# FIELD INFORMATION FORM



Site Name: **WGSL**  
 Site No.: **Culvert** Sample Point: **Culvert**  
 Sample ID:

This Waste Management Field Information Form is Required.  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

PURGE INFO		PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED			
<small>Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.</small>										
PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N			Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N 0.45 $\mu$ or _____ $\mu$ (circle or fill in)						
	Purging Device <input checked="" type="checkbox"/>	A-Submersible Pump	D-Bailey	A-In-line Disposable	C-Vacuum					
	Sampling Device <input checked="" type="checkbox"/>	B-Peristaltic Pump	E-Piston Pump	B-Pressure	X-Other _____					
X-Other: <input type="checkbox"/>	C-QED Bladder Pump	F-Dipper/Bottle	Sample Tube Type: <input checked="" type="checkbox"/>	A-Teflon	C-PVC	X-Other: _____				
WELL DATA		Well Elevation (at TOC) _____ (ft/msl)	Depth to Water (DTW) (from TOC) _____ (ft)	Groundwater Elevation (site datum, from TOC) _____ (ft/msl)						
		Total Well Depth (from TOC) _____ (ft)	Stick Up (from ground elevation) _____ (ft)	Casing ID _____ (in)	Casing Material _____					
<small>Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.</small>										
STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ hos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)	
	1	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1	1	1	1	1	
	2	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	1	1	1	1	1	
	3	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	1	1	1	1	1	
	4	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	1	1	1	1	1	
	5				1	1	1	1	1	
	6				1	1	1	1	1	
	7				1	1	1	1	1	
	8				1	1	1	1	1	
	9				1	1	1	1	1	
<small>Suggested range for 3 consec. readings or note Permit/State requirements:</small> <small>+/- 0.2</small> <small>+/- 3%</small> <small>-</small> <small>+/- 10%</small> <small>+/- 25 mV</small> <small>Stabilize</small>										
<small>Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.</small>										
FIELD DATA	SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ hos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____		
	01/13/11	8.14								
<small>Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).</small>										
FIELD COMMENTS	Sample Appearance: <u>Light reddish brown</u> Odor: <u>None</u> Color: <u>Light Reddish</u> Other: _____ Weather Conditions (required daily, or as conditions change): Direction/Speed: <u>16 mph NE</u> Outlook: <u>Clear</u> Brown Precipitation: <u>Y</u> or <u>N</u> Specific Comments (including purge/well volume calculations if required): <u>1845 1900</u> <u>collected 3 aliquots at ① +850, ② +845, ③ 1915</u> <u>1 Sample time 1915 (composite sample)</u> <u>Flow 2.2 cfs based on output @ detention basin</u>									
	<small>I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):</small>									
	01/13/11	Pel La Placa			1845	1900		AECOM		
	01/13/11	Tobias Koehler						AECOM		
	Date	Name	Signature				Company			
<small>DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy</small> <small>Page 105 of 110</small>										
<small>01/13/2011</small> <b>WMH 001502</b> <small>WM (0108)</small>										

# FIELD INFORMATION FORM



Site Name:	W GSL			<b>This Waste Management Field Information Form is Required</b> This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).				Laboratory Use Only/Lab ID:				
Site No.:				Sample Point:	Upcony on			Sample ID				
<b>PURGE INFO</b>		PURGE DATE (MM DD YY)		PURGE TIME (2400 Hr Clock)		ELAPSED HRS (hrs:min)		WATER VOL IN CASING (Gallons)		ACTUAL VOL PURGED (Gallons)		
		10/13/10		PRL								WELL VOL PURGED
<i>Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.</i>												
<b>PURGE/SAMPLE EQUIPMENT</b>		Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N				Filter Device: <input type="checkbox"/> Y or <input checked="" type="checkbox"/> N 0.45 $\mu$ or <input type="checkbox"/> $\mu$ (circle or fill in)						
		Purging Device	<input type="checkbox"/>			A- Submersible Pump	D-Bailey	<input type="checkbox"/>			A-In-line Disposable	C-Vacuum
		Sampling Device	<input checked="" type="checkbox"/> F			B-Peristaltic Pump	E-Piston Pump	<input type="checkbox"/>			B-Pressure	X-Other
X-Other:								Sample Tube Type:	<input type="checkbox"/>			
<b>WELL DATA</b>		Well Elevation (at TOC)			Depth to Water (DTW) (from TOC)			Groundwater Elevation (site datum, from TOC)				
Total Well Depth (from TOC)					Stick Up (from ground elevation)			Casing ID (in)			Casing Material	
<i>Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.</i>												
<b>STABILIZATION DATA (Optional)</b>	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ hos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)			
			1 <sup>st</sup>									
			2 <sup>nd</sup>									
			3 <sup>rd</sup>									
			4 <sup>th</sup>									
<i>Suggested range for 3 consec. readings or note Permit/State requirements:</i>												
<i>Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.</i>												
<b>FIELD DATA</b>	SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ hos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other:				
	01/13/11	8.46						Units				
<i>Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).</i>												
<b>FIELD COMMENTS</b>	Sample Appearance:		Light reddish brown		Odor:	None		Color:	L-Reddish b'own		Other:	
	Weather Conditions (required daily, or as conditions change):				Direction/Speed:	10 mph NE		Outlook:	clear		Precipitation:	
<i>Specific Comments (including purge/well volume calculations if required):</i>												
<i>Collected 3 aliquots at ① 1720, ② 185 &amp; ③ 1750 Sample time 1750 (composite sample)</i>												
<i>I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):</i>												
01/13/10	Petra LaPlace			Tobias Kochler			Lisa Blaauw			AECOM		
01/13/10							SD 390th			AECOM		
Date	Name	Signature		Signature		Signature		Signature		Company		
<i>DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy</i>												
<i>Page 100 of 110</i>												
<i>01/13/2011 WMH OG1538 WM (0108)</i>												

# FIELD INFORMATION FORM



Site Name: **WGSL**  
 Site No.:  Sample Point: **Ocean West**  
 Sample ID:

This Waste Management Field Information Form is Required  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

PURGE INFO	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
	PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED (Gallons)							
Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.													
PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N		Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N 0.45 $\mu$ or <input type="checkbox"/> $\mu$ (circle or fill in)										
	Purging Device <input type="checkbox"/>	A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump	D-Bailer E-Piston Pump F-Dipper/Bottle	Filter Type: <input type="checkbox"/>		A-In-line Disposable B-Pressure		C-Vacuum X-Other					
	Sampling Device <input checked="" type="checkbox"/> F	X-Other: <input type="checkbox"/>	Sample Tube Type: <input type="checkbox"/>		A-Teflon B-Stainless Steel		C-PVC D-Polypropylene		X-Other: _____				
WELL DATA	Well Elevation (at TOC)	<input type="checkbox"/>		Depth to Water (DTW) (from TOC)	<input type="checkbox"/>		Groundwater Elevation (site datum, from TOC)		<input type="checkbox"/>				
	Total Well Depth (from TOC)	<input type="checkbox"/>		Stick Up (from ground elevation)	<input type="checkbox"/>		Casing ID (in)	Casing Material (in)					
	Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.												
STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ hos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1 <sup>st</sup>	<input type="checkbox"/> 1 <sup>st</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2 <sup>nd</sup>	<input type="checkbox"/> 2 <sup>nd</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 3 <sup>rd</sup>	<input type="checkbox"/> 3 <sup>rd</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 4 <sup>th</sup>	<input type="checkbox"/> 4 <sup>th</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Suggested range for 3 consec. readings or note Permit/State requirements:  +/- 0.2      +/- 3%      -      -      +/- 10%      +/- 25 mV      Stabilize													
Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.													
FIELD DATA	SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ hos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____					
	<input type="checkbox"/> 01/13/11	<input type="checkbox"/> 7.92	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Units: _____					
Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).													
Sample Appearance: <b>Light reddish brown</b>		Odor: <b>None</b>		Color: <b>Light reddish brown</b>		Other: _____							
Weather Conditions (required daily, or as conditions change):		Direction/Speed: <b>10 mph NE</b>		Outlook: <b>clear</b>		Precipitation: <b>Y</b> or <b>N</b>							
Specific Comments (including purge/well volume calculations if required):  <b>Collected grab sample 200 ft west of ocean outlet along shoreline at 1745</b>													
FIELD COMMENTS	I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):												
	<b>01/13/11</b>	<b>Pete Laplace</b>	<b>1/13/11</b>	<b>AECOM</b>									
<b>01/13/11</b>	<b>Tobias Koehler</b>	<b>1/13/11</b>	<b>AECOM</b>										
Date	Name	Signature	Company										

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

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# FIELD INFORMATION FORM



Site Name: WGSL  
 Site No.:        Sample Point: Ocean East  
 Sample ID:       

This Waste Management Field Information Form is Required  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

PURGE INFO		PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED		
Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vol Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.									
PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N		Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N 0.45 $\mu$ or <input type="checkbox"/> $\mu$ (circle or fill in)						
	Purging Device <input type="checkbox"/>		A-In-line Disposable <input type="checkbox"/> B-Pressure <input type="checkbox"/>		C-Vacuum <input type="checkbox"/> X-Other: _____				
	Sampling Device <input checked="" type="checkbox"/> F		A-Piston Pump <input type="checkbox"/> B-Peristaltic Pump <input type="checkbox"/> C-QED Bladder Pump <input type="checkbox"/> F-Dripper/Bottle <input checked="" type="checkbox"/>		A-Teflon <input type="checkbox"/> B-Stainless Steel <input type="checkbox"/>		C-PVC <input type="checkbox"/> D-Polypropylene <input type="checkbox"/> X-Other: _____		
WELL DATA	Well Elevation (at TOC) <input type="checkbox"/> (ft/msl)		Depth to Water (DTW) (from TOC) <input type="checkbox"/> (ft)		Groundwater Elevation (site datum, from TOC) <input type="checkbox"/> (ft/msl)				
	Total Well Depth (from TOC) <input type="checkbox"/> (ft)		Stick Up (from ground elevation) <input type="checkbox"/> (ft)		Casing ID <input type="checkbox"/> (in)		Casing Material <input type="checkbox"/>		
Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.									
STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>
	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>
	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>
	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>
	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>
	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>	8 <sup>th</sup>
	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>
Suggested range for 3 consec. readings or note Permit/State requirements: +/- 0.2      +/- 3%      -      +/- 10%      +/- 25 mV								Stabilize	
Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.									
FIELD DATA	SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ mhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other:	
	01/13/11	8.06						Units	
Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).									
FIELD COMMENTS	Sample Appearance: <u>Light reddish brown</u>		Odor: <u>None</u>		Color: <u>Light reddish brown</u>		Other: _____		
	Weather Conditions (required daily, or as conditions change): Direction/Speed: <u>10 mph NE</u>		Outlook: <u>Clear</u>		Precipitation: <u>Y</u> or <u>N</u>				
Specific Comments (including purge/well volume calculations if required):  <u>Collected grab sample 200 ft east of ocean outlet</u> <u>along shore line at 1800</u>									
I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):									
01/13/11 Date	Pete LaPlace Name	<u>Pete LaPlace</u>		<u>LaPlace</u>		<u>LaPlace</u>		AECOM Company	
01/13/11 Date	Tobias Koehler Name	<u>Tobias Koehler</u>		<u>Koehler</u>		<u>Koehler</u>		AECOM Company	
DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy Page 108 of 110									
WMH 000585 WM (0108) 1/27/2011									



## Login Sample Receipt Check List

Client: Waste Management

Job Number: 280-11648-1

Login Number: 11648

List Source: TestAmerica Denver

Creator: Bindel, Aaron M

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	False	9.2, 9.7, 7.9, 7.7, 8.1
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	NO TESTS ON COC
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	